This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

HARVARD MEDICAL LIBRARY
IN THE
FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE

HARVARD MEDICAL LIBRARY
IN THE
FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE

THE BOSTON
MEDICAL AND SURGICAL
JOURNAL

GEORGE B. SHATTUCK, M. D., EDITOR
ABNER POST, M. D., ASSISTANT EDITOR

VOLUME CVII.

JUNE—DECEMBER, 1882

BOSTON
HOUGHTON, MIFFLIN AND COMPANY
The Riverside Press, Cambridge
1882

CONTRIBUTORS TO VOLUME CVII.

ABBOTT, S. W., M. D.
ADAMS, J. F. A., M. D.
AMES, A., M. D.
BAKER, W. H., M. D.
BEACH, H. H. A., M. D.
BOWDITCH, E. W.
BOWDITCH, H. P., M. D.
BRADFORD, E. H., M. D.
BROWN, F. F., M. D.
CHANNING, W., M. D.
CHEEVER, D. W., M. D.
CUTTER, J. C., M. D.
DANA, C. L., M. D.
DAVENPORT, B. F., M. D.
DAVENPORT, F. H., M. D.
DEWOLF, O. C., M. D.
DIXON, R. E., M. D.
DURGIN, S. H., M. D.
DWIGHT, T., M. D.
EDES, R. T., M. D.
ELLIOT, J. W., M. D.
ENGEL, H., M. D.
ESKRIDGE, J. T., M. D.
FOLSOM, C. F., M. D.
GANNETT, W. W., M. D.
GERRISH, F. H., M. D.
GREEN, J. O., M. D.
GREENOUGH, F. B., M. D.
HEFFENGER, A. C., M. D.
HILLS, W. B., M. D.
HODGES, R. M., M. D.
HOLMES, O. W., M. D.
HOMANS, J., M. D.
JOHNSON, A. H., M. D.
KEATING, J. M., M. D.
KINNEAR, B. O., M. D.
KNIGHT, F. I., M. D.
LAWRENCE, R. M., M. D.
LYNDE, J. P., M. D.
McCOLLOM, J. H., M. D.
MASON, A. P., M. D.
MEARS, J. E., M. D.
MEIGS, A. V., M. D.
MOSHER, E. M., M. D.
NICHOLS, J. H., M. D.
OTIS, E. O., M. D.
PAGE, F. W., M. D.
PORTER, P. BRYNBERG, M. D.
PRESBREY, S. D., M. D.
PRINCE, M., M. D.
PUTNAM, J. J., M. D.
PUTNAM, S., M. D.
REYNOLDS, J. P., M. D.
RICE, J. M., M. D.
RICHARDSON, M. H., M. D.
RICHARDSON, W. L., M. D.
ROTCH, T. M., M. D.
RUSSELL, I., M. D.,
SABINE, G. K., M. D.
STILLMAN, C. F., M. D.
TILDEN, G. H., M. D.
TOWER, C. C., M. D.
TUTTLE, G. L., M. D.
WADSWORTH, O. F., M. D.
WARREN, J. C., M. D.
WARREN, J. W., M. D.
WEBBER, S. G., M. D.
WHITE, J. C., M. D.
WHITNEY, H. B., M. D.
WHITNEY, W. F., M. D.
WILLIAMS, E. T., M. D.
WILLIAMS, F. H., M. D.
WILSON, H. A., M. D.
WITHINGTON, C. F., M. D.
WOODBURY, FRANK, M. D.

INDEX TO VOLUME CVII.

The Index of the Boston Medical and Surgical Journal is arranged by authors and by subjects. Articles relating to the circulatory, respiratory, or nervous systems are to be found under those heads respectively. This method of indexing is that followed by the Editors of the *Index Medicus*, and is believed to be the most satisfactory plan which can be adopted. F. H. B.

Abbott, S. W. A summary of obstetric cases, 2; uses and abuses of animal vaccination, 423.

Abdomen. Gun-shot wound of the abdomen, Buchanan, G., 69.

Abortion. Medical history of a case of abortion, with a synopsis of the criminal trial, Bush, J. F., 205.

Abdominal Section. Résumé of twenty-five cases, Mears, J. E., 609.

Abscess. Report of three cases of abscess of the brain, Eskridge, J. T., 123, 156; errors of diagnosis in retropharyngeal abscess, McCoy, A. W., 574; cold abscess from probable caries of the pelvis, Cheever, D. W., 577.

Adams, J. F. A. The New Lenox malaria case, 604.

Adler, J. M., and Hunt, W. Hypertrophy of the prostate gland accompanied by profuse and fatal hæmorrhage, 448.

Agnew, C. R. Neuritis, retinitis, and conjunctivitis, 17.

Albumen. A new test for albumen, Roberts, W., 574.

Albuminuria. Clinical observations on albuminuria, Meigs, A. V., 409; puerperal, Brown, F. F., 579.

Alcohol. Susceptibility to alcohol as modified by infection, Mollière, 358; alcoholic stimulants in the forming stages of diphtheria, Putnam, S., 367; the medico-legal relations of chronic alcoholism; its pathological aspects, Sabine, G. K., 460.

Allport, W. W. Education of dentists, 16.

American Dyspepsia. Robbins, J. H., 132.

Ames, A. Some sanitary aspects of Massachusetts, 1.

Ammonia as a leavening agent, 68.

Amputation. Reamputation of the leg; fourth similar operation on the same patient, Cheever, D. W., 578.

Analysts. Conference of State analysts of food and drugs at Montreal, 234.

Anatomy. Transposition of the viscera, 406; Dr. Holmes's resignation of the Parkman professorship of anatomy in Harvard University, 426, 529; autopsy of a case of transposition of the viscera, Wilson, H. A., 435; abnormal distribution of arteries at base of the brain, Webber, S. G., 543.

Aneurism. Elastic bandage in the cure of, 18; traumatic aneurism, Richardson, M. H., 516.

Animal Vaccination. Uses and abuses of animal vaccination, Abbott, S. W., 423.

Annus Medicus, 616.

Anthropometry, 306.

Apoplexy. Pancreatic apoplexy, with a report of two cases, Prince, M., 28, 35, 55.

Appropriation for the National Board of Health, 42.

Army and Navy. Dental and oral surgeons in the army and navy, Marshall, J. S., 15; Surgeon-General Crane, 42; annual report of the Surgeon-General U. S. A., 427.

Arsenic, necrosis from, Goodwillie, 15.

Ascites due to cirrhosis of the liver, Flint, A., 218.

Asiatic Cholera at Newport, Cabell, J. L., 282.

Athetosis. A case of athetosis relieved by nerve-stretching, Hammond, G. M., 13.

Athletics. College athletics and professional trainers, 375.

Atkinson, J. E. A circinate papular syphiloderm, 252.

Autopsies. On the collection of data at autopsies, Bowditch, H. P., 365.

Ayer, J. B. Scarlet fever after confinement, 491.

Baird, S. F. Dr. J. J. Mason on the Central Nervous System of Reptiles and Batrachians, 598.

Baker, W. H. Recent progress in gynæcology, 61; vaginal ovariotomy, 395; laceration of the cervix uteri, 444; Free Hospital for Women, 455; frequent and painful micturition from vascularity of the neck of the bladder, 494; vaginal douche, 614.

Baltimore. Letter from Baltimore, 571.

Bangor. Letter from Bangor, Sanger, E. F., 357.

Barker, F. Leucorrhœa, its constitutional causes and therapeutics, 301.

Barnes, H. J. The water supply of Boston, 585.

Baer, B. F. Punctured wound of the pregnant uterus, partial escape of the fœtus into the abdominal cavity, retention of the fœtus five years, 261.

Barrett, W. C. Heredity in dental development, 15.

Barton, J. M. Ecchymoses of the mucous membrane of the stomach, 499.

Beach, H. H. A. Recent progress in surgery, 6.

Beecher, A. C. W. Tongue and larynx from a case of elephantiasis Græcorum, 590.

Bellevue Medical College. Free trade in diplomas, 595.

Benevolent Society, Massachusetts Medical, 355, 523.

Berkshire County. Malaria and the courts in Berkshire County, 375.

Bibliography. Annual Report of the Surgeon General, United States Army, 427; Bartholow, R., Medical Electricity: a Practical Treatise on the Applications of Electricity to Medicine and Surgery, 499; Beard, G. M., The Psychology of the Salem Witchcraft Excitement of 1692 and its practical Application to our own Time, 230; Boston, Tenth Annual Report of the Board of Health of the City of, 114; Boston City Hospital, Medical and Surgical Reports, third series, 254; Boston City Hospital, Eighteenth Annual Report, 232; Boston Lunatic Hospital, Forty-Third Annual Report, 253; Brighton, Eng., Transactions of the Brighton Health Congress, 1881, 398; Brown, W. S., A Clinical Hand-Book on the Diseases of Women, 472; Buckley, C. F., Cerebral Hyperæmia, does it exist? 499; Butler, J., Electricity in Surgery, 89; Cathell, D. W., The Physician Himself and what he should add to the strictly scientific, 230; City Hospital, Boston, Medical and Surgical Reports of the City Hospital of the City of Boston, third series, 63, 88; Donaldson, S. J., Contributions to Practical Gynæcology, 160; Duhring, L. A., Diseases of the Skin, 40; Granville, J. M., How to make the Best of Life, 398; Griesinger, W., Mental Pathology and Therapeutics, 395; Gynecological Society, American, Transactions, vol. vi., 274; Hardaway, W. A., Essentials of Vaccination, a compilation of facts relating to Vaccine Inoculation, and its Influence in the Prevention of Small-pox, 398; Henoch, E., Lectures on Diseases of Children, 206; Index Catalogue, vol. iii., 329; Johns Hopkins University, Seventh Annual Report, 569; Levin, J., The Incidental Effects of Drugs, 18; Manson, O. F., A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine, 187; Marine Hospital Service, Annual Report of the Supervising Surgeon of the, 595; Massachusetts, Fortieth Registration Report, 385; Murrell, W., What to do in cases of Poisoning, 374; Neale, R., The Medical Digest, or Busy Practitioner's Vade-Mecum, 374; Norris, R., The Physiology and Pathology of the Blood, 568; Nunn, T. W., On Cancer of the Breast, 112; Ohio, Twenty-eighth Annual Report of the State Commissioner of the Common Schools to the General Assembly of the State of Ohio for the School Year ending August 31, 1881, 374; Palmer, A. B., a Treatise on the Science and Practice of Medicine, or the Pathology and Therapeutics of Internal Diseases, 374; Phillips, C. D. F., Materia Medica and Therapeutics, 207; Potter, S. O. L., Questions on Human Anatomy, 472; Ralfe, C. H., On the Morbid Conditions of the Mind dependent upon Derangements of Digestion, 276; Ranney, A. L., Practical Medical Anatomy, 274; Report of the Commissioner of Education for the year 1880, 328; Rhode Island, Fourth Annual Report of the Board of Health of the State of Rhode Island, 65; Schell, H. S., A Manual of Ophthalmic Practice, 89; Treves, F., Scrofula and its Gland Diseases, 397; Wells, T. S., On Ovarian and Uterine Tumors, their Diagnosis and Treatment, 327; Wilkinson, H. W., Some Practical Observations on Vaccination, 568; Wolfe, J. R., On the Diseases and Injuries of the Eye, 615.

Bigelow, H. J. The French Academy of Medicine's award of a prize to Dr. H. J. Bigelow, 190.

Billings, F. S. Plastic experiments in the abdominal cavity of domestic animals, 34.

Biography. Anderson, W. C., 356; Atwood, F., 168, 192; Bell, C., 312; Brown, W. H., 528; Capron, G., 334; Cheever, D. W., 41; Clover, J. T., 399; Crane, C. H., 42; Dougherty, A. N., 620; Draper, H., 522; Elliott, D. M., 216; Holmes, C. C., 120; Jenkins, J. F., 401; Kuenstler, H., 620; Lawton, S., 312; Lowell, A. L., 480; Mason, G. E., 552; Osborne, G., 624; Pierson, W., 356; Smith, A., 312; Turner, O. C., 456; Valerj, G., 168, Watson, T., 524; White, C. B., 403; Wilson, M. A., 68.

Bishop, P. E. A case of face presentation in the mento-posterior position, 45; "threatened typhoid," 380.

Blake, J. G. Pancreatic apoplexy, notes of a case, 28; irritation of abraded surfaces as a source of disease which may become malignant, 590.

Boardman, W. E. Certain accidents or abnormal conditions the result of labor, 589.

Boston. The work of the Boston Board of Health, Durgin, S. H., 343, 353; Boston Dispensary, 382; water supply of Boston, Post, A., 564; the water supply of Boston, Barnes, H. J., 585; the city water, Bowditch, H. I., 621.

Bosworth, F. H. Adenoma of the pharynx, 394.

Boutelle, J. T. Aunt Betsey's "simpsons," 454.

Bowditch, E. W. The sanitary aspect of Nahant, Mass., 97, 190, 351.

Bowditch, H. I. Severe disease of the heart, with pleuritic effusion on both sides, 420; the National Board of Health, 523.

Bowditch, H. P. On the collection of data at autopsies, 365.

Bradford, E. H. Torticollis, 87; recent progress in surgery of joints and of deformities, 347; a painful affection of the wrist-joint, 495; Dr. Haven's reply to Dr. E. T. Williams on the censor question, 573; a case of double osteotomy and osteoclasis, 611.

Brain. Notes on twelve cases of brain tumor, chiefly with reference to diagnosis, Mills, C. K., 10; hæmorrhage into the pons, Miles, F. T., 14; report of three cases of abscess of the brain, Eskridge, J. T., 123, 156.

Brighton. The sewerage of Brighton, England, 189.

Bright's Disease. Clinical lecture on Bright's disease, Flint, A., 193; the hereditary tendency to Bright's disease, 286; Bright's disease, Flint, A., 361, 363; a case of Bright's disease treated by pilocarpine, Webber, S. G., 390, 395.

Bronchocele. A case of bronchocele, Deblois, T. A., 584.

Broughton, H. W. A household epidemic from bad drainage, 587.

Brown, F. F. Puerperal albuminuria, 579.

Bruce, J. M. Symmetrical signs of basic cavity, 332.

Bruen, E. T. Cirrhosis of liver in the stage of enlargement, 449; primary carcinoma of pancreas and liver, 497; dilatation and atheroma of the pulmonary artery, with an opening through the interventricular septum, 592.

Buchanan, G. Gun-shot wound of the abdomen, 69.

Buckingham, E. M. Criticism of Dr. J. P. Lynde's paper on infantile mortality, 211.

Buckler, T. H. Rheumatic leucolnoitis of the pulmonary air-tubes, 406; "the inoculative furor," 453.

Busey, S. C. The influence of high-heeled French shoes upon the female form, and upon the relations of the pelvic organs, 324.

Bush, J. F. Medical history of a case of abortion, with a synopsis of the criminal trial, 205.

Byrd, H. L. Treatment of fracture of the clavicle, 430.

Cabell, J. L. Asiatic cholera at Newport, 282; National Board of Health 424.

Cabot, A. T. Difficult labor; perinephritic abscess; carbolic-acid poisoning, 321.

Calhoun (Atlanta). Accidental vaccination of the eye, 17.
Capron, G. Miscarriages, 326.
Carbolic Acid poisoning, Cabot, A. T., 321.
Carcinoma. Case of carcinoma mammæ, Wirgman, C., 322; recurring carcinoma of mamma and axillary glands, Nancrede, C. B., 323; carcinoma of stomach, Musser, J. H., 323; primary carcinoma of pancreas and liver, Bruen, E. T , 497.
Caswell, E. T. Litholapaxy, 327.
Cattle. Texas cattle, Rauch, J. H., 423; stock transportation, Holman, E. E., 423.
Cephalic Murmur, Gibson, 405.
Cerebral Diseases. Cases bearing on diagnosis and localization of cerebral diseases and their difficulties, Janeway, E. G., 369; cerebral anæmia and exhaustion, Webber, S. G., 415, 421.
Cervix Uteri. Laceration of, Baker, W. H., 444; some statistics and observations concerning laceration of the cervix uteri and its treatment, Davenport, F. H., 487, 493.
Chadwick, J. R. Fibroid tumor of the uterus, 133.
Channing, W. Non-restraint in lunatic asylums, 282; recent progress in the management of lunatic asylums and care of the insane, 441.
Chapman, J. Dr. Chapman's system of neuro-dynamic medicine, with cases, Kinnear, B. O., 128.
Cheever, D. W. The succession to the professorship of surgery in Harvard University, 41; Medical and Surgical Reports of the City Hospital of the City of Boston, third series, edited by D. W. Cheever, O. F. Wadsworth, and A. L. Mason, 88; clinical lecture, partial asphyxia by hanging; incised wounds of trachea and œsophagus, stricture of larynx; secondary tracheotomy; forcible dilatation of the rima glottidis; cold abscess from probable caries of the pelvis; reamputation of the leg; fourth similar operation on the same patient; lacerated wounds of both hands and loss of fingers by a circular saw accident, 577.
Chemistry. Recent progress in medical chemistry, Hills, W. B., 135; notes on progress in physiological chemistry, Warren, J. W., 294.
Children. Infantile mortality, its causes and prevention, Lynde, J. P., 49; recent progress in diseases of children, Rotch, T. M., 82, 108; criticism of Dr. J. P. Lynde's paper on infantile mortality, Buckingham, E. M., 211; the use of tobacco by children, 502; malaria in children, Holt, L. E., 566.
China. Opium in China; how many smokers does the drug supply? 186.
Chloral Hydrate. Large dose of, Madigan, 22.
Chloroform. A supposed death from chloroform, Kinloch, 166; another death from chloroform, 283.
Cholera. Asiatic cholera at Newport, Cabell, J. L., 282.
Chorea. A case of post-paralytic chorea, with remarks on the treatment of choreaic symptoms in general, Rockwell, A. D., 12.
Circulatory System. Hæmorrhages into the pons, Miles, F. T., 14; recurrent pharyngeal hæmorrhages, Porter, W., 16; pancreatic apoplexy, with a report of two cases, Prince, M., 28, 55; organic murmurs of the heart, Flint, A., 121; treatment of irregular heart in pulmonary consumption, Woodbury, F., 142; percussion of the heart in health and disease, Whitney, H. B., 270; a successful case of transfusion, Walter, W., 285; hypertrophy of the heart, Flint, A., 361; thrombosis of the femoral or iliac veins, Flint, A., 363; the cephalic murmur, Gibson, 405; severe disease of the heart, with pleuritic effusion on both sides, Bowditch, H. I., 420; modification in the calibre of vessels in the stumps of amputated limbs, 451; cirrhosis of the lungs, enormous cavity, hypertrophy of the right ventricle, Shattuck, F. C., 489; traumatic aneurism, Richardson, M. H., 516; great hypertrophy of the heart due to severe valvular lesions, O'Hara, M., 564; four cases of "phlegmasia alba dolens," Williams, H., 581, 586; a case of varicose tumor of vulva, Manton, W. P., 584; dilatation and atheroma of the pulmonary artery, with an opening through the interventricular septum, Bruen, 592; autopsy in a case of meningitis with diseased heart; bilateral extravasation of blood on the brain from meningeal hæmorrhage without paralysis, Longstreth, M., 601.
Cirrhosis. Ascites due to cirrhosis of the liver, Flint, A., 218; cirrhosis of liver in the stage of enlargement, Bruen, E. T., 449; cirrhosis of the lungs, enormous cavity, hypertrophy of the right ventricle, Shattuck, F. C., 489.
City Hospital, Boston. Medical and Surgical Reports of the City Hospital of the City of Boston, third series, 88; the tents at the Boston City Hospital, 91; Eighteenth Annual Report of the Boston City Hospital, 232.
Clark, A. P. Removal of intra-uterine fibroids, 226.
Clavicle. Treatment of fracture of the clavicle, Byrd, H. L., 430.
Climate. Letter from Kane, Penn., 210.
Coggin, D. A test for simulated one-sided deafness, 284.
Cogshall (Michigan). Contagiousness of tuberculous consumption, 424.
Cohen, J. S. Tubercle of the larynx, 392.
College athletics and professional trainers, 375.
Compton. Combined sewers, 424.
Concussion. The somewhat frequent occurrence of degeneration of the postero-lateral columns of the spinal cord in so-called spinal concussion, Edes, R. T., 265.
Conjunctivitis. Diphtheritic conjunctivitis treated with iodoform, Scott, X. C., 16; neuritis, retinitis, and conjunctivitis, Agnew, C. R., 17.
Connecticut. Spread of malarial diseases, 68, 166.
Connor (Detroit). Tumor of the base of the skull, 17.
Contagious Diseases. An act to prevent the spread of contagious diseases, 67; the operation of the Contagious Diseases Act in England during 1881, 208; report of a select committee of the House of Commons on contagious diseases acts, 231; contagiousness of tuberculous consumption, Cogshall, 424; the contagiousness and transmissibility of consumption, 500.
Cotting, B. E. Remarks made at a social meeting of the Massachusetts Medical Benevolent Society, — its twenty-fifth anniversary, 523.
Crane, C. H. Appointment as Surgeon-General U. S. A., 42.
Criminal Women. Health of criminal women, Mosher, E. M., 316.
Cutaneous System. Elephantiasis arabum, Heffenger, A. C., 154; annual meeting of the American Dermatological Association, 229, 250; annual address, Hyde, J. N., 229; myxo-angioma of the skin; dermatitis papillaris capillitii, Heitzmann, C., 229; psoriasis, Taylor, R. W., 230; two cases of acute general psoriasis following vaccination, Rohé, G. H., 230; calx sulphurata, Piffard, H. G., 230; a pigmented neoplasm of the skin, Hardaway, W. A., 250; nerves of the skin, Robinson, A. R., 251; the contagion of leprosy, White, J. C., 251; remarks on the use of ergot in skin diseases, Heitzmann, C., 252; a circinate papular syphiloderm, Atkinson, J. E., 252; a case of pellagra, Sherwood, S., 252; progress in dermatology, Tilden, G. H., 318; the old age of the skin, White, J. C., 484, 489; the bacterium of "red sweat," Prince, M., 586.
Cutter, E. Iodoform pencils, 372.
Cutter, J. C. Medical education in Japan in 1882, 292.
"**Cycling,**" 278.
Cyrus, W. H. Inversion of the uterus of eight years' duration, 262.

Dana, C. L. The effect of nerve-stretching upon the spinal cord, 14; a study of some points in the physiology of digestion; the function of the cardiac and pyloric portions of the stomach; value of peptones and of pancreatic extracts, 241; the digestive power of commercial pepsin, 382.
Davenport, B. F. Report upon new pharmaceutical preparations and the inspection of food and drugs, 560.
Davenport, F. H. Some statistics and observations concerning laceration of the cervix uteri, and its treatment, 487, 493.
Deafness. A test for simulated one-sided deafness, Coggin, D., 284.
DeBlois, T. A. Laryngeal forceps, 62; improved throat mirror, 85; a case of bronchocele, 584.
Deformities. Recent progress in surgery of joints and of deformities, Bradford, E. H., 347; case of protracted gestation complicated by deformed pelvis and ante-partum hour-glass constriction of the uterus; delivery by version, Dixon, R. E., 368.
Degenerative tendencies in American life, Spencer, H., 477.
Dentistry. Oral hygiene, Kempton, W. D., 14; heredity in dental development, Barrett, W. C., 15; dental and oral surgeons in the army and navy, Marshall, J. S., 15; the injurious effects of mercury as used in dentistry, Talbot, E. S., 16; education of dentists, Allport, W. W., 16; medico-dental science, Lawrence, J. B., 16.
DeWolf, O. C. Glycosuria, 219, 247
Diabetes. A case of diabetic coma with lipæmia, Fraser and Logan, 338.
Digestive System. Oral hygiene, Kempton, W. D., 14; heredity in dental development, Barrett, W. C., 15; pancreatic apoplexy, with a report of two cases, Prince, M., 28, 35; a case of intussusception with recovery, Langmaid, S. W., 33; plastic experiments in the abdominal cavity of domestic animals, Billings, F. S., 34; gun-shot wound of the abdomen, Buchanan, G., 69; obstructive jaundice, Flint, A., 121; American dyspepsia, Robbins, J. H., 132; treatment of vomiting by abstinence from food and medicine, Webber, S. G., 180; ascites due to cirrhosis of the liver, Flint, A., 218; some points in the physiology of digestion, function of the cardiac and pyloric portions of the stomach, value of peptones and pancreatic extracts, Dana, C. L , 241; carcinoma of stomach, Musser, J. H., 323; cirrhosis of liver in the stage of enlargement, Bruen, E. T., 449; primary carcinoma of pancreas and liver, Bruen, E. T., 497; spindle-celled sarcoma of the small intestine, Edwards, W. A., 499; ecchymoses of the mucous membrane of the stomach, Barton, J. M., 499.
Diphtheria. Diphtheritic conjunctivitis treated with iodoform, Scott, X. C., 16; the local treatment of diphtheria, Kupffer, J., 239; alcoholic stimulants in the forming stages of diphtheria, Putnam, S., 367.
Diplomas. Another diploma mill, 545; free trade in diplomas, 595; more diplomas? 619.
Dislocation. Sub-coracoid dislocation of the humerus, Richardson, M. H., 564.
Dispensary. Boston Dispensary, 382.
Dixon, R. B. A new head perforator, 544.
Dixon, R. E. Case of protracted gestation complicated by deformed pelvis and ante-partum hour-glass constriction of the uterus; delivery by version, 368.
Domestic Animals. Plastic experiments in the abdominal cavities of domestic animals, Billings, F. S., 34.
Drainage. A household epidemic from bad drainage, Broughton, H. W., 587.
Dresden. Letter from Dresden, the lying-in hospital, Monks, G. H., 43.
Drysdale, T. M. The ovarian corpuscle; its origin and characteristics, 325.
Dujardin-Beaumetz. On the treatment of pneumonia, 457, 481, 505.
Dunmire. Caseous degeneration of the kidneys, 448.
Durgin, S. H. The work of the Boston Board of Health, 343, 358.
Dwight, T. Recent progress in anatomy, 223.
Dyspepsia. American dyspepsia, Robbins, J. H., 132.
Dystocia. Observations on a series of cases. Reynolds, J. P., 516.

Ear. A test for simulated one-sided deafness, Coggin, D., 284; recent progress in otology, Green, J. O., 583.
Edes, R. T. The somewhat frequent occurrence of degeneration of the postero-lateral columns of the spinal cord in so-called spinal concussion, 265.
Editorials. The elastic bandage in the cure of external aneurism, 18; is the pathologist worthy of any hire? 21; the execution of Guiteau and society's profit, 22; the succession to the professorship of surgery in Harvard University, 41; the surgical section of the Suffolk District Medical Society, 41; Surgeon-General Crane, 42; the appropriation for the National Board of Health, 42; fourth annual report of the Board of Health of the State of Rhode Island, 65; the Guiteau autopsy, 67; the medical testimony at the Guiteau trial, 67; an act to prevent the spread of contagious diseases, 67; toy pistols and tetanus, 90; the tents at the Boston City Hospital, 91; the spread of infection by rags, 91; tenth annual report of the Board of Health of the City of Boston, 114; bad drinking water and politics, 116; the regulation of sources of water supply in thickly populated districts, 137; the appropriations for the National Board of Health, 138; are schools of medical practice to have representatives in the United States Government service? 138; the prevention of syphilis, 161; observations on an epidemic of relapsing fever, 161; the National Board of Health, 185; opium in China, how many smokers does the drug supply? 186; the operation of the contagious diseases acts in England during 1881, 208; the smoke test for drains, 208; report of a select committee of the House of Commons on contagious diseases acts, 231; eighteenth annual report of the Boston City Hospital, 232; the effect upon health of prolonged heat and dryness as shown by death-rates, 233; siphonage and ventilation of traps, 255; a museum of hygiene at Washington, 256; a national medical and sanitary exhibition, 257; Professor Esmarch on President Garfield's case, 257; Guiteau's brain, 277; "cycling," 278; "threatened with typhoid," 279; the new school of veterinary medicine, 306; anthropometry, 306; report of the commissioner of education for the year 1880, 328; the Index Catalogue, volume iii., 329; the medical student, 354; immigrant inspection service, 355; the Boston Medical Benevolent Society, 355; malaria and the courts in Berkshire County, 375; college athletics and professional trainers, 375; opening of the fiftieth session of McGill College, celebration of the semi-centennial by the faculty, 376; immigrant inspection service, 399; J. T. Clover, F. R. C. S., Eng., 399; Dr. Oliver Wendell Holmes's resignation of the Parkman professorship of anatomy in Harvard University, 426; annual report of the Surgeon-gen-

eral U. S. A., 427; the Medical Benevolent Society, 428; the National Board of Health and the American Public Health Association, 450; modifications in the calibre of vessels in the stumps of amputated limbs, 451; the corporation will consult the medical faculty in legislating for the medical department of Harvard University, 451; physicians interested in the Boston water commission, 452; the contagiousness and transmissibility of consumption, the International Congress of Hygiene, 500; the use of tobacco, 501; the use of tobacco by children, 502; another malpractice suit, 502; the relation of hospitals to medical education and of hospital trustees to the medical staff, 473; Boston water and the water commission again, 475; Dr. J. J. Mason's microscopical researches on the central nervous system of reptiles and batrachians, 519; tenth annual meeting of the New York State Charities Aid Association, 519; the use of tobacco by boys, 520; the Warren triennial prize, 520; another diploma mill, 545; Dr. Oliver Wendell Holmes's farewell lecture at the Harvard Medical School, 546; the new pharmacopœia and the strength of its opium preparations, 547; the prohibition of public funerals after death from a contagious disease, 547; Mr Hoadley's resignation from the Massachusetts Board of Health, Lunacy, and Charity, 548; the Warren triennial prize, 548; new antipyretics, 569; John Hopkins University, seventh annual report, 569; changes in the Massachusetts Board of Health, Lunacy, and Charity, 570; report of the commissioners appointed to inquire respecting small-pox and fever hospitals in London, 594: free trade in diplomas, 595; annual report of the supervising Surgeon-General of the Marine Hospital Service, 595; annus medicus, 616: more diplomas? 619.

Education of dentists, Allpot, W. W., 16; graduates at the Harvard Medical School in 1882, 24; medical education in Japan in 1882, Cutter, J. C., 292; the new school of veterinary medicine, 306; women at the University of London, 310; the medical student, 354; Dr. Holmes's resignation of the Parkman professorship of anatomy in Harvard University, 426; the Corporation will consult the Medical Faculty in legislating for the medical department of Harvard University, 451; the relation of hospitals to medical education and hospital trustees to the medical staff, 473; another diploma mill, 545; John Hopkins University, seventh annual report, 569; London Medical School for Women, 597.

Edwards, W. A. Spindle-celled sarcoma of the small intestine, 498.

Egyptian Expedition, 207.

Elastic bandage in the cure of external aneurism, 18.

Eldredge, T. H. Tedious labor due to rigidity of the os uteri, 326.

Elephant. The birth of an elephant, Sussdorf, G. E., 70.

Elephantiasis arabum, Heffenger, A. C., 154.

Elliot, J. W. Fibro-myoma of uterus, causing most intense dysmenorrhœa for fifteen years, enucleation, recovery, 151, 159.

Empyema. Two cases of empyema, Marion, H. E., 180, 183.

Emmet, T. A. A new method of exploration, with the pathology and treatment of certain lesions of the female urethra, 303.

Engel, H. Some facts explained by modern pathology, 243.

Epidermic Medication. The epidermic method of administering medicines, 214.

Epilepsy. The curability of epilepsy, Ferraud, 406.

Ergot. The use of ergot in skin diseases, Heitzmann, C., 252; the proper use of ergot in obstetrics, Johnson, J. T., 298.

Ergotine. Ergotine in typhoid, 212.

Erythroxylon Coca, its physiological effect, and especially its effect on the excretion of the kidney, Mason, A. P., 221.

Eskridge, J. T. Report of three cases of abscess of the brain, 123, 156; intra-venous injection of aqua ammoniæ fortior in a case of sewage-poisoning, 430; specimens from a man who died with brain, lung, heart, liver, spleen, kidney, and bladder lesions, 497; abscess of the liver following arrested menstrual discharge from exposure to cold; pyæmic abscesses of the lungs and spleen; perforation of the bowel; severe heart complications; death during the seventh week, 565.

Esmarch, F. Concerning the treatment of the wound of President Garfield, 234, 257.

Estlander. The thoracoplastic operation of Estlander, Fenger, 333.

Ether. Death under ether, Tait, L., 118.

Excision. An analysis of some cases of excisions, Parks, E. L., 471.

Expert. Expert testimony, Rice, J. M., 26; another "expert" witness, 382.

Extra-Uterine Pregnancy. Notes of twenty-one cases of extra-uterine pregnancy, Thomas, T. G., 304; the use of electricity in extra-uterine pregnancy, Garrigues, H. J., 304.

Eye. Glaucoma, Peck, E. S., 8; diphtheritic conjunctivitis treated with iodoform, Scott, X. C., 16; accidental vaccination of the eye, Calhoun, 17; neuritis, retinitis, and conjunctivitis, Agnew, C. R., 17; communicable eye disease, Young, H. G., 18; near-sightedness in school, 43; optico-ciliary neurotomy, fifteen cases, Wadsworth, O. F., 254; renal trouble in a multipara complicated with blindness, 470; recent progress in ophthalmology, Wadsworth, O. F., 540.

Favus. Kerosene as a remedy for favus, 453.

Fenger (Chicago). The thoracoplastic operation of Estlander, 333.

Fernet and Martel. Introduction of aliments and medicines through the nose, 262.

Ferraud. The curability of epilepsy, 406.

Fibroid polypus of the nose, Seiler, C., 18; fibroid tumor of the uterus, Chadwick, J. R., 183; the relative value of hysterectomy and of the complete removal of the uterine appendages for the cure of uterine fibroids, Thornton, J. K., 302; sloughing fibroid, Fifield, W. C. B., 589.

Fibro-Myoma of uterus, Elliot, J. W., 151, 159.

Fifield, W. C. B. Sloughing fibroid, 589; production of the organic climax of sexual feeling apart from any sexual appetite or sexual intercourse, 589.

Flint, A. Clinical lecture, obstructive jaundice, organic murmurs of the heart, chronic syphilitic laryngitis, 121; clinical lecture on Bright's disease, 193; clinical lecture, tuberculous laryngitis; advanced phthisis; ascites due to cirrhosis of the liver, 217; clinical lecture, Bright's disease, with hypertrophy of the heart, lead-poisoning, gout, and intercostal neuralgia in the same subject: phthisis, Bright's disease, and thrombosis of the femoral or iliac veins, 361; phthisis as a self-limited disease, 526.

Folsom, C. F. Some obscure mental symptoms of mental disease, 149; fortieth Registration Report, 385.

Food. Phosphates in food; food in its relations to the development of tissues, Lawrence, 15; conference of State analysts of food and drugs at Montreal, 234; introduction of aliments and medicines through the nose, Fernet and Martel, 262; frozen meats, 332; forced feeding and overfeeding, 380; the digestive power of commercial pepsin, Dana, C. L., 382.

Forceps. The use of the obstetric forceps, McCollom, J. H., 267.

Foreign Bodies swallowed, Reynolds, J. P., 518.

Forest, W. E. The management of labor with reference to the prevention of subsequent uterine disease, 467.

Fourment. The action of salt on trichinæ, 358.

Fraser and Logan. A case of diabetic coma with lipæmia, 333.

Free Hospital for women, 455.

Fuller, F. B. A case of traumatic tetanus, 117.

Funerals. The prohibition of public funerals after death from a contagious disease, 547.

Galvano-Caustic instruments, Seiler, C., 17.

Gannett, W. W. Relation of mould fungi to disease, 195.

Garfield. Concerning the treatment of the wound of President Garfield, Esmarch, F., 234, 257.

Garrigues, H. J. The use of electricity in extra-uterine pregnancy, 304.

General Diseases. Leprosy and its relations to syphilis, Piffard, H. G., 85; spread of malarial diseases in Connecticut, 68, 166; the presence of micrococcus in malignant measles, its importance in treatment, Keating, J. M., 101; chronic syphilitic laryngitis, Flint, A., 123; the routine treatment of venereal diseases, Greenough, F. B., 145, 160, 175; the prevention of syphilis, 161; observations on an epidemic of relapsing fever, 161; ergotine in typhoid, 212; unity of poisons in scarlet, typhoid, puerperal, and other infectious fevers, 214; hyperpyrexia in rheumatism, 214; "threatened with typhoid," 279, 308, 334; Asiatic cholera at Newport, Cabell, J. L., 282; case of carcinoma mammæ, Wirgman, C., 322; recurring carcinoma of mamma and axillary glands, Nancrede, C. B., 323; spindle-celled sarcoma of thigh, Simes, J. H. C., 324; a case of diabetic coma with lipæmia, Fraser and Logan, 333; the small-pox epidemic in Boston, McCollom, J. H., 315, 353; "threatened typhoid," Bishop, P. E., 380; primary carcinoma of pancreas and liver, Bruen, E. T., 497; the contagiousness and transmissibility of consumption, 500; typhoid fever and sewer gas, Otis, E. O., 539.

Generative System. The disease of the Scythians and analogous conditions, Hammond, W. A., 14; protracted menstruation, Wells, F., 89, 118; recent progress in gynæcology, Baker, W. H., 61; ovariotomy at the Samaritan Free Hospital, 70; fibro-myoma of uterus, Elliot, J. W., 151, 159; fibroid tumor of the uterus, Chadwick, J. R., 183; a brief glance at some of the border lines in the gynæcic medicine and surgery of to-day, Wheeler, W. G., 184; medical history of a case of abortion with a synopsis of the criminal trial, Bush, J. F., 205; ovulation and menstruation, Parsons, A. W., 214; removal of intra-uterine fibroids, Clark, A. P., 226; punctured wound of the pregnant uterus, partial escape of the fœtus into the abdominal cavity, retention of the fœtus five years, Baer, B. F., 261; inversion of the uterus of eight years' duration, Cyrus, W. H., 262; Porro's operation, 285; two successful cases of removal of uterus and appendages, Gerrish, F. H., 289; treatment of the pedicle in ovariotomy, Sutton, 299; leucorrhœa, its constitutional causes and therapeutics, Barker, F., 301; the relative value of hysterectomy and of the complete removal of the uterine appendages for the cure of uterine fibroids, Thornton, J. K., 302; a new method of exploration, with the pathology and treatment of certain lesions of the female urethra, 303; the influence of high-heeled French shoes upon the female form, and upon the relations of the pelvic organs, Busey, S. C., 324; the mechanical therapeutics of versions and flexions of the uterus, Van de Warker, E., 325; the ovarian corpuscle, its origin and characteristics, Drysdale, T. M., 325; ovarian pressure, 334; the placenta, its development and its diseases, Norris, A. L., 373; puerperal septicæmia and localized peritonitis, Nichols, J. H., 386, 396; one hundred cases of antiseptic ovariotomy, Homans, J., 413; introductory clinical lecture on diseases of women, Thomas, T. G., 431; laceration of the cervix uteri, Baker, W. H., 444; hypertrophy of the prostate gland accompanied by profuse and fatal hæmorrhage, Adler, J. M., and Hunt, W., 448; the management of labor with reference to the prevention of subsequent uterine disease, Forest, W. E., 467; some statistics and observations concerning laceration of the cervix uteri and its treatment, Davenport, F. H., 487, 493; frequent and painful micturition from vascularity of the neck of the bladder, Baker, W. H., 494; A case of varicose tumor of vulva, Manton, W. P., 584; certain accidents or abnormal conditions the result of labor, Boardman, W. E., 589; pelvic effusion, abscess, chronic sequelæ, Lyman, G. H., 589; sloughing fibroid, Fifield, W. C. B., 589; production of the organic climax of sexual feeling apart from any sexual appetite or sexual intercourse, Fifield, W. C. B., 589; irritation of abraded surfaces as a source of disease which may become malignant, Blake, J. G., 590; sarcoma of the prostate gland, Hughes, W. E., 593; résumé of twenty-five cases of abdominal section, Mears, J. E., 609.

Gerould, J. B. A vaginal douche, 561.

Gerrish, F. H. Two successful cases of removal of uterus and appendages, 289.

Gheel. A visit to Gheel, 284.

Gibson (Birmingham). The cephalic murmur, 405.

Gihon, A. L. National museum of hygiene, 402.

Glaucoma, Peck, E. S., 8.

Glycosuria. DeWolf, O. C., 219, 247.

Goodwillie. Necrosis from arsenic, 15.

Gout. Flint, A., 361.

Graham, D. The new City Hospital at Worcester, Mass., 212; Dr. Douglas Graham on massage, 525.

Green, J. Orne. Recent progress in otology, 583.

Greenough, F. B. The routine treatment of venereal diseases, 145, 160, 175.

Guiteau. The execution of Guiteau and society's profit, 22; the alleged insanity of Guiteau, 46; the Guiteau autopsy, 67; the medical testimony at the Guiteau trial, 67; Guiteau's brain, 277, 380.

Gun-Shot Wounds. Gun-shot wound of the abdomen, Buchanan, G. 69; five cases of wounds of the palm from blank cartridges, followed by tetanus and death, Ingalls, W., 85; traumatic tetanus, Millet, C. S., 86; toy pistols and tetanus, 90; a case of traumatic tetanus, Fuller, F. B., 117.

Gynæcic Medicine and Surgery. A brief glance at some of the border lines in the gynæcic medicine and surgery, Wheeler, W. G., 184.

Gynæcology. Recent progress in gynæcology, Baker, W. H., 61; introductory clinical lecture on diseases of women, Thomas, T. G., 431.

Hæmorrhage into the pons, Miles, F. T., 14; recurrent pharyngeal hæmorrhages, Porter, W., 16.

Hammond, G. M. A case of athetosis relieved by nerve-stretching, 18.

Hammond, W. A. The disease of the Scythians, morbus feminarum, and analogous conditions, 14.

Hardaway, W. A. A pigmented neoplasm of the skin, 250.
Harvard Medical School. Graduates in 1882, 24; the succession to the professorship of surgery in Harvard University, 41; farewell address of Dr. Oliver Wendell Holmes to the medical school of Harvard University, Tuesday, November 28, 1882, 529, 546.
Harveian Oration, delivered at the Royal College of Physicians, June 24, 1882, Johnson, G., 25.
Haven, H. C. A proposed change in the method of examining candidates for the Massachusetts Medical Society, 549.
Heart. Organic murmurs of the heart, Flint, A., 121; percussion of the heart in health and disease, Whitney, H. B., 270.
Hebra, H. A case of phosphorus poisoning which could not be diagnosticated either in the living body or from the macroscopic autopsy, 357.
Heffenger, A. C. Elephantiasis arabum, 154.
Heitzmann, C. Myxo-angioma of the skin; dermatitis papillaris capillitii, 229; remarks on the use of ergot in skin diseases, 252.
Heredity in dental development, Barrett, W. C., 15.
Hills, W. B. Recent progress in medical chemistry, 135.
Hoadley. Mr. Hoadley's resignation from the Massachusetts Board of Health, Lunacy, and Charity, 548.
Hodges, R. M. Painless synovial effusions, 534, 548.
Holman, E. E. Stock transportation, 428.
Holmes, O. W. Medical highways and byways, 381; Dr. Oliver Wendell Holmes's resignation of the Parkman professorship of anatomy in Harvard University, 426; farewell address of Dr. Oliver Wendell Holmes to the Medical School of Harvard University, Tuesday, November 28, 1882, 529, 546.
Holt, L. E. Malaria in children, 566.
Homans, J. One hundred cases of antiseptic ovariotomy, 413.
Homicide. Report of a case of suicide, Tower, C. C., 436.
Homœopathy. The relations of the Fellows of the Massachusetts Medical Society to homœopathy and the homœopaths, Spooner, J. W., 73; are schools of medical practice to have representatives in the United States Government service? 188; some homœopathic and isopathic medicines, 549.
Hooper, F. H. Papilloma of the vocal cords, 39; removal of nasopharyngeal tumor, 183.
Hopkins, W. B. Tenosynovitis, its causes, nature, symptoms, and treatment, based upon an analysis of fifteen cases, 81.
Hospitals. The relation of hospitals to medical education and of hospital trustees to the medical staff, 473.
Hospitalism, Storer, H. R., 374.
Hospital for Incurables. Osgood, H., 598.
Hour-Glass Contraction. Case of protracted gestation complicated by deformed pelvis and ante-partum hour-glass constriction of the uterus; delivery by version, Dixon, R. B., 368.
Hughes, W. E. Sarcoma of the prostate gland, 593.
Hunter, W. Medicine one hundred years ago, 94.
Hutchinson, J. Sciatica, 118.
Hyde, J. N. Annual address before American Dermatological Association, 229.
Hygiene, Health, and Boards of Health. Some sanitary aspects of Massachusetts, Ames, A., 1; oral hygiene, Kempton, W. D., 14; the appropriation for the National Board of Health, 42; fourth annual report of the Board of Health of the State of Rhode Island, 65; a remonstrance against cutting down the appropriation for the National Board of Health, 69; the spread of infection by rags, 91; the National Association for Rural and Sanitary Improvement, 93; the sanitary aspect of Nahant, Mass., Bowditch, E. W., 97; tenth annual report of the Board of Health of the City of Boston, 114; bad drinking water and politics, 116; the regulation of sources of water supply in thickly populated districts, 137; the appropriations for the National Board of Health, 138; infection by rags, 142; the National Board of Health, 185; the sewerage of Brighton, England, 189; the sanitary condition of Nahant, Bowditch, E. W., 190; the smoke test for drains, 208; the effect upon health of prolonged heat and dryness as shown by death-rates, 233; conference of State analysts of food and drugs at Montreal, 234; siphonage and ventilation of traps, 255, 272; a museum of hygiene at Washington, 256; a national medical and sanitary exhibition, 257; health of boys' boarding-schools, Lincoln, D. F., 260; the liability of corporations for supplying impure water, 286; health of criminal women, Mosher, E. M., 316; the influence of high-heeled shoes upon the female form, and upon the relations of the pelvic organs, Busey, S. C., 324; frozen meats, 332; the work of the Boston Board of Health, Durgin, S. H., 343, 353; immigrant inspection service, 355; American Public Health Association, 402; national museum of hygiene, 402; the Newport system of sanitary protection, Storer, H. R., 403; life on wheels, Wilson, T. P., 423; compulsory reports of cases of infectious disease and deaths, Wight, O. W., 425; cremation of household refuse and excreta, Keating, J. M., 425; the international congress of hygiene, 500; the use of tobacco, 501; the use of tobacco by children, 502; the use of tobacco by boys, 520; the prohibition of public funerals after death from a contagious disease, 547; Mr. Hoadley's resignation from the Massachusetts Board of Health, Lunacy, and Charity, 548; changes in the Massachusetts Board of Health, Lunacy, and Charity, 570; a household epidemic from bad drainage, Broughton, H. W., 587; report of the commissioners appointed to inquire respecting small-pox and fever hospitals in London, 594; Massachusetts State Board of Health, 598.
Hyperpyrexia in rheumatism, 214.
Hystero-Epilepsy, 287.

Immigrant inspection service, 355, 399.
Incurables, hospital for, Osgood H., 598.
Infantile Mortality. Its causes and prevention, Lynde, J. P., 49.
Infection. The spread of infection by rags, 91; infection by rags, 142; compulsory reports of cases of infectious disease and deaths, Wight, O. W., 425.
Ingalls, W. Five cases of wounds of the palm from blank cartridges followed by tetanus and death, 85.
Inoculation. "The inoculative furor," Buckler, T. H., 458.
Insane. Recent progress in the management of lunatic asylums and care of the insane, Channing, W., 441; medico-legal relations of insanity, Russell, I., 557.
Instruments and Apparatus. Galvano-caustic instruments, Seiler, C., 17; elastic bandages in the cure of external aneurism, 18; improved throat mirror, De Blois, T. A., 35; a vaginal douche, Gerould, J. B., 561; laryngeal forceps, DeBlois, T. A., 62; the surgical mechanics of local joint extension, Stillman, C. F., 200; modification of Dr. Thomas's curette, Marcy, H. O., 229; the use of the obstetric forceps, McCollom, J. H., 266; a new head perforator, Dixon, R. B., 544; vaginal douche, Baker, W. H., 614.
Intra-Uterine Fibroids. Removal of intra-uterine fibroids, Clark, A. P., 226.
Intussusception. A case of intussusception with recovery, Langmaid, S. W., 33.
Iodoform. Diphtheritic conjunctivitis treated with iodoform, Scott, X. C., 16; iodoform pencils, Cutter, E., 372.
Iron. A study of the action of iron, Williams, F. H., 105.

Jacobi, A. The summer vacation in the public schools, 566.
Janeway, E. G. Cases bearing on diagnosis and localization of cerebral diseases and their difficulties, 369.
Japan. Medical education in Japan in 1882, Cutter, J. C., 292.
Jaundice. Obstructive jaundice, Flint, A., 121.
Johnson, A. H. On the habitual use of poisons, 337.
Johnson, G. Abstract of the Harveian Oration delivered at the Royal College of Physicians, June 24, 1882, 25.
Johnson, J. T. The proper use of ergot in obstetrics, 298.
Joints. Recent progress in surgery of joints and of deformities, Bradford, E. H., 347; a painful affection of the wrist-joint, Bradford, E. H., 495; the treatment of a form of painful periarthritis of the shoulder, Putnam, J. J., 509, 516, 536; painless synovial effusions, Hodges, R. M., 534, 543.
Jurisprudence. Medical expert testimony, Rice, J. M., 26; the medical testimony at the Guiteau trial, 67; an act to prevent the spread of contagious diseases, 67; medico-legal note (suit for malpractice), 139; medical history of a case of abortion, with a synopsis of the criminal trial, Bush, J. F., 205; what constitutes a medico-legal autopsy? Presbrey, S. D., 313; another "expert" witness, 332; report of a case of homicide, Tower, C. C., 436; the medico-legal relations of chronic alcoholism, its pathological aspects, Sabine, G. K., 460; another malpractice suit, 502; another diploma mill, 545; medico-legal relations of insanity, Russell, I., 559; medico-legal notes, 571; partial asphyxia by hanging; incised wounds of trachea and œsophagus, Cheever, D. W., 577.

Kane, Penn. Letter from Kane, Pennsylvania, 210.
Keating, J. M. The presence of the micrococcus in the blood of malignant measles; its importance in treatment, 101; cremation of household refuse and excreta, 425.
Kedzie. Annual address before the American Public Health Association, 402.
Keith. Communication on Dr. Keith and Listerism, Osgood, H., 259.
Kempton, W. D. Oral hygiene, 14; kerosene as a remedy for favus, Seymour, W. W., 453.
Kidd. The hereditary tendency of Bright's disease, 286.
Kidneys. Caseous degeneration of the kidneys, Dunmire, 449.
Kinloch (Charleston, S. C.). A supposed death from chloroform, 166.
Kinnear, B. O. Dr. John Chapman's system of neuro-dynamic medicine, with cases, 128.
Knight, F. I. Report on progress in the treatment of diseases of the throat, 177, 208.
Kupffer, J. Local treatment of diphtheria, 239.

Labor. Summary of obstetric cases, Abbott, S. W., 2; recent progress in obstetrics, Richardson, W. L., 32; a case of face presentation in the mento-posterior position, Bishop, P. E., 45.
Lacerated wounds of both hands and loss of fingers by a circular saw accident, Cheever, D. W., 578.
Langmaid, S. W. A case of intussusception with recovery, 33; tracheal tumors resulting from tracheotomy, 39.
Laryngitis. Chronic syphilitic laryngitis, Flint, A., 123; tuberculous laryngitis, Flint, A., 217.
Laryngological Society, New York, 392.
Larynx. Laryngeal forceps, DeBlois, T. A., 62; tubercle of the larynx, Cohen, J. S., 392.
Lawrence, J. B. Medico-dental science, 16.
Lawrence, R. M. "Phonic Paralysis," with rapid respiration, 57, 88.
Lawrence (New York). Food in its relations to the development of tissues, 15.
Lead-Poisoning. Flint, A., 361.
Lenox malaria case, Adams, J. F. A., 604.
Leprosy and its relations to syphilis, Piffard, H. G., 85; the contagion of leprosy, White, J. C., 251.
Leucorrhœa, its constitutional causes and therapeutics, Barker, F., 301.
Lincoln, D. F. Health of boys' boarding-schools, 260.
Listerism. Communication on Dr. Keith and Listerism, 259.
Litholapaxy. Caswell, E. T., 327.
Liver. Ascites due to cirrhosis of the liver, Flint, A., 218; cirrhosis of liver in the stage of enlargement, Bruen, E. T., 449; primary carcinoma of pancreas and liver, Bruen, E. T., 497.
London. Letter from London; the jubilee meeting of the British Medical Association at Worcester, 187; letter from London, 524; report of the commissioners appointed to inquire respecting small-pox and fever hospitals in London, 594; letter from London; London Medical School for Women, 597.
Longstreth, M. Autopsy in a case of meningitis with diseased heart; bilateral extravasation of blood on the brain from meningeal hæmorrhage without paralysis; sciatic rheumatism, 601.
Lunatic Asylums. Non-restraint in lunatic asylums, Channing, W., 282; recent progress in the management of lunatic asylums and care of the insane, Channing, W., 441.
Lyman, G. H. Pelvic effusions and the importance of their early recognition, with reference to treatment, with a report of eleven cases, 372; pelvic effusion, abscess, chronic sequelæ, 589.
Lyman, T. The alleged insanity of Guiteau, 46.
Lynde, J. P. Infantile mortality, its causes and prevention, 49; criticism of Dr. J. P. Lynde's paper on infantile mortality, Buckingham, E. M., 211.

McCollom, J. H. The use of the obstetric forceps, 266; the small-pox epidemic in Boston, 344.
MacConnell, W. G. Myxomatous tumor of the posterior cervical region, 496.
McCoy, A. W. Errors of diagnosis in retropharyngeal abscess, 574.
McGill University. Opening of the fiftieth session of McGill College, celebration of the semi-centennial by the faculty, 376.
Mackenzie, M. Excision of the tonsils, 393.

Madigan (Brooklyn). Large dose of chloral hydrate, 22.
Malaria. Spread of malarial diseases in Connecticut, 68, 166; malaria and the courts in Berkshire County, 375; typhoid fever and malaria, 478; malaria in children, Holt, L. E., 566; the New Lenox malaria case, Adams, J. F. A., 604.
Male Fern, a death from, 478.
Mamma. Case of carcinoma mammæ, Wirgman, C., 322; recurring carcinoma of mamma and axillary glands, Nancrede, C. B., 323.
Manton, W. P. Obstetrical poliklinic, Leipzig; a case of varicose tumor of the vulva, 584.
Marcy, H. O. Modification of Dr. Thomas's curette, 229.
Marine Hospital Service. Annual Report of the Supervising Surgeon-general of the Marine Hospital Service, 595.
Marion, H. E. Two cases of empyema, 180, 183.
Marshall, J. S. The need of dental and oral surgeons in the army and navy, 15.
Mason, A. P. Erythroxylon coca; its physiological effect and especially its effect on the excretion of urea by the kidney, 221.
Mason, J. J. Microscopical Researches on the Central Nervous System of Reptiles and Batrachians, 519; letter on Dr. J. J. Mason on the Central Nervous System of Reptiles and Batrachians, Baird, S. F., 598.
Massachusetts, sanitary problems of, Ames, A., 1; State Board of Health, 598.
Massage. Dr. Douglas Graham on massage, 525; massage as practiced by barbarians, 526.
Materia Medica and Therapeutics. Injurious effects of mercury as used in dentistry, Talbot, E. S., 16; diphtheritic conjunctivitis treated with iodoform, Scott, X. C., 16; elastic bandage in the cure of external aneurism, 18; large dose of chloral hydrate, Madigan, 22; permanency of the rest treatment, Page, F. W., 77; a study of the action of iron, Williams, F. H., 105; Dr. John Chapman's system of neuro-dynamic medicine, with cases, Kinnear, B. O., 128; the routine treatment of venereal diseases, Greenough, F. B., 145, 160; letter from Kane, Penn., 210; ergotine in typhoid, 212; the epidermic method of administering medicines, 214; erythroxylon coca; its physiological effect, and especially its effect on the excretion of urea by the kidney, Mason, A. P., 221; the use of ergot in skin diseases, Heitzmann, C., 252; introduction of aliments and medicines through the nose, Fernet and Martel, 262; the proper use of ergot in obstetrics, Johnson, J. T., 298; the use of electricity in extra-uterine pregnancy, Garrigues, H. J., 304; on the habitual use of poisons, Johnson, A. H., 337; susceptibility to alcohol as modified by infection, Molliere, 358; alcoholic stimulants in the forming stages of diphtheria, Putnam, S., 367; iodoform pencils, Cutter, E., 372; the digestive power of commercial pepsin, Dana, C. L., 382; a case of Bright's disease treated by pilocarpine, Webber, S. G., 390, 395; report on progress in therapeutics, Williams, F. H., 390, 417; alarming symptoms from eight grains of potassium iodide, Weist, J. R., 405; intra-venous injections of aqua ammoniæ fortior in a case of sewage poisoning, Eskridge, J. T., 430; kerosene as a remedy for favus, Seymour, W. W., 453; the new pharmacopœia and the strength of its opium preparations, 547; some homœopathic and isopathic medicines, 549; report upon new pharmaceutical preparations and the inspection of food and drugs, 560; new antipyretics, 569.
Mears, J. E. A résumé of twenty-five cases of abdominal section, 609.
Measles. The presence of micrococcus in malignant measles, its importance in treatment, Keating, J. M., 101.
Mediastinum. Lymphomatous tumor of the mediastinum, Smith, G. C., 449.
Medicine. Medicine one hundred years ago, Hunter, W., 94; the address in medicine before the British Medical Association, Wade, 190; relation of mould fungi to disease, Gannett, W. W., 195.
Meigs, A. V. Clinical observations on albuminuria based upon a study of sixty-two cases seen in private practice, 409.
Meningitis. Case of meningitis with diseased heart, Longstreth, M., 601.
Menstruation, protracted, Wells, F., 1, 39, 118; ovulation and menstruation, Parsons, A. W., 214.
Mental Symptoms. Some obscure mental symptoms of disease, Folsom, C. F., 149.
Mercury. Injurious effects of mercury as used in dentistry, Talbot, E. S., 16.
Meredith, W. A. Communication on Dr. Keith and Listerism, 259.
Meschede. Observations on an epidemic of relapsing fever, 161.
Michigan State Board of Health. A remonstrance against cutting down the appropriation for the National Board of Health, 69.
Micrococcus. The presence of micrococcus in malignant measles, Keating, J. M., 101.
Middlesex East District Medical Society. Summary of obstetric cases, Abbott, S. W., 2.
Miles, F. T. Hæmorrhage into the pons, 14.
Millet, O. S. Traumatic tetanus, 86.
Mills, C. K. Notes on twelve cases of brain tumor, chiefly with reference to diagnosis, 10.
Mind. The execution of Guiteau and society's profit, 22; the alleged insanity of Guiteau, Lyman, T., 46; some obscure mental symptoms of disease, Folsom, C. F., 149; Guiteau's brain, 277; non-restraint in lunatic asylums, Channing, W., 282; a visit to Gheel, 284; Guiteau's brain, 380; recent progress in the management of lunatic asylums and care of the insane, Channing, W., 441; medico-legal relations of insanity, Russell, I., 557.
Minneapolis. Letter from Minneapolis, W. M., 45.
Minot, F. Puerperal septicæmia, 491; ventilation in the lying-in room, 494.
Mirrored Writing, 622.
Miscarriages. Capron, G., 326.
Mollière (Lyons). Susceptibility to alcohol as modified by infection, 358.
Monks, G. H. Letter from Dresden, 43.
Morbus Feminarum, the disease of the Scythians, and analogous conditions, Hammond, W. A., 14.
Mortality. Infantile mortality; its causes and prevention, Lynde, J. P., 49; death under ether, Tait, L., 118; a supposed death from chloroform, Kinloch, 166; criticism of Dr. J. P. Lynde's paper on infantile mortality, Buckingham, E. M., 211; the decrease in deaths from childbirth, 288; another death from chloroform, 283.
Mosher, E. W. Health of criminal women, 316.
Mould Fungi. Relation of mould fungi to disease, Gannett, W. W., 195.
Musser, J. H. Carcinoma of stomach, 323.
Myxoma. Myxomatous tumor of the posterior cervical region, MacConnell, W. G., 496.

Nahant. The sanitary condition of Nahant, Bowditch, E. W., 190; the sanitary aspect of Nahant, Bowditch, E. W., 97, 351.
Nancrede, C. B. Recurring carcinoma of mamma and axillary glands, 323.
Naso-pharyngeal Tumor. Removal of naso-pharyngeal tumor, Hooper, 183.
National Board of Health, appropriation for the, 42, 138; a remonstrance against cutting down the appropriation for the National Board of Health, 69; the National Board of Health, 185; Cabell, J. L., 424; position of the National Board of Health, 447; National Board of Health and the American Public Health Association, 450; the National Board of Health, Bowditch, H. I., 523.
National Museum of Hygiene, 402.
Necrosis from arsenic, Goodwillie, 15.
Nerve Stretching. A case of athetosis, relieved by nerve-stretching, Hammond, G. M., 13; the effect of nerve-stretching upon the spinal cord, Dana, C. L., 14.
Nervous System. Notes on twelve cases of brain tumor, chiefly with reference to diagnosis, Mills, C. K., 10; a case of post-paralytic chorea, with remarks on the treatment of choreaic symptoms in general, Rockwell, A. D., 12; a case of athetosis, relieved by nerve-stretching, Hammond, G. M., 13; the disease of the Scythians, morbus feminarum, and analogous conditions, Hammond, W. A., 14; hæmorrhage into the pons, Miles, F. T., 14; the effects of nerve-stretching upon the spinal cord, Dana, C. L., 14; "phonic paralysis," with rapid respiration, Lawrence, R. M., 57, 88; five cases of wounds of the palm from blank cartridges, followed by tetanus and death, Ingalls, W., 85; traumatic tetanus, Millet, C. S., 86; toy pistols and tetanus, 90; a case of traumatic tetanus, Fuller, F. B., 117; sciatica, Hutchinson, J., 118; report of three cases of abscess of the brain, Eskridge, J. T., 123, 156; Dr. John Chapman's system of neuro-dynamic medicine, with cases, Kinnear, B. O., 128; report on progress in the pathology of diseases of the nervous system, Webber, S. G., 248; nerves of the skin, Robinson, A. R., 251; the somewhat frequent occurrence of degeneration of the postero-lateral columns of the spinal cord in so-called spinal concussion, Edes, R. T., 265; Guiteau's brain, 277; hystero-epilepsy, 287; intercostal neuralgia, Flint, A., 361; cases bearing on diagnosis and localization of cerebral diseases and their difficulties, Janeway, E. G., 369; Guiteau's brain, 380; the treatment of caries in the cervical vertebræ, Roberts, 381; thrombosis of the posterior cerebral sinus, Rotch, T. M., 395; the cephalic murmur, Gibson, 405; cerebral anæmia and exhaustion, Webber, S. G., 415, 421; the relation between poliomyelitis and disseminated neuritis, Putnam, J. J., 495; myxomatous tumor of the posterior cervical region, McConnell, W. G., 496; Dr. J. J. Mason's microscopical researches on the central nervous system of reptiles and batrachians, 519; autopsy in a case of meningitis with diseased heart; bilateral extravasation of blood on the brain from meningeal hæmorrhage without paralysis, Longstreth, M., 601; a case of general paralysis, Tuttle, G. T., 612, 614; acute ascending paralysis, 621; mirrored writing, 622.
Neuralgia. Intercostal neuralgia, Flint, A., 361.
Neuritis, retinitis, and conjunctivitis, Agnew, C. R., 17.
Neuro-Dynamic Medicine. Dr. John Chapman's system of neuro-dynamic medicine, with cases, Kinnear, B. O., 128.
Newport, system of sanitary protection, Storer, H. R., 403.
Nichols, J. H. Puerperal septicæmia and localized peritonitis, 386, 396.
Non-restraint in lunatic asylums, Channing, W., 282.
Nordhoff, C. Massage as practiced by barbarians, 526.
Norris, A. L. The placenta, its development and its diseases, 373.

O'Hara, M. Great hypertrophy of the heart due to severe valvular lesions, 564.
Old Age of the skin, White, J. C., 484, 489.
Opium in China; how many smokers does the drug supply? 186.
Oral Hygiene, Kempton, W. D., 14.
Orthopraxy. Torticollis, Bradford, E. H., 87; the surgical mechanics of local joint extension, Stillman, C. F., 200; recent progress in surgery of joints and of deformities, Bradford, E. H., 347; a case of double osteotomy and osteoclasis, Bradford, E. H., 611.
Osgood, H. Communications on Dr. Keith and Listerism, 259; hospital for incurables, 598.
Otis, E. O. Typhoid fever and sewer gas, 539.
Osteotomy. A case of double osteotomy and osteoclasis, Bradford, E. H., 611.
Otology. Recent progress in otology, Green, J. O., 583.
Ovarian Corpuscle, its origin and characteristics, Drysdale, T. M., 325.
Ovariotomy. Ovariotomy at the Samaritan Free Hospital, 70; treatment of the pedicle in ovariotomy, Sutton, 299; vaginal ovariotomy, Baker, W. H., 395; one hundred cases of antiseptic ovariotomy, Homans, J., 418.
Ovulation and menstruation, Parsons, A. W., 214.

Page, F. W. Permanency of the rest treatment, 77, 470.
Pancreas. Pancreatic apoplexy, with a report of two cases, Prince, M., 28, 35, 55; primary carcinoma of pancreas and liver, Bruen, E. T., 497.
Papilloma of the vocal cords, Hooper, F. H., 39.
Paralysis. "Phonic paralysis," with rapid respiration, Lawrence, R. M., 57, 88; a case of general paralysis, Tuttle, G. T., 612, 614; acute ascending, 621.
Parks, E. L. An analysis of some cases of excision, 471.
Parsons, A. W. Ovulation and menstruation, 214.
Parvin, T. The care of the perinæum in the second stage of labor, 300.
Patent Medicines. A patent medicine paradise, 454.
Pathological Anatomy. Necrosis from arsenic, Goodwillie, 15.
Pathologist. Is the pathologist worthy of any hire? 21.
Pathology. Some facts explained by modern pathology, Engel, H., 243; on the collection of data at autopsies, Bowditch, H. P., 365; recent progress in pathology and pathological anatomy, Whitney, W. F., 464, 513.
Peck, E. S. Glaucoma, 8.
Pellagra. A case of pellagra, Sherwood, S., 252.
Pelvic Effusions and the importance of their early recognition, with reference to treatment, with a report of eleven cases, Lyman, G. H., 372.
Peptones. Value of peptones and pancreatic extracts, Dana, C. L., 242.
Pepsin. The digestive power of commercial pepsin, Dana, C. L., 382.
Percussion of the heart in health and disease, Whitney, H. B., 270.
Perforator. A new head perforator, Dixon, R. B., 544.
Periarthritis. The treatment of a form of painful periarthritis of the shoulder, Putnam, J. J., 509, 516, 536.
Perinæum. The care of the perinæum in the second stage of labor, Parvin, T., 300.
Perinephritic Abscess, Cabot, A. T., 321.
Peritonitis. Puerperal septicæmia and localized peritonitis, Nichols, J. H., 386.

Pharmacopœia. The new pharmacopœia and the strength of its opium preparations, 547.
Pharyngeal recurrent hæmorrhages, Porter, W., 16.
Pharynx. Adenoma of the pharynx, Howorth, F. H., 584; errors of diagnosis in retro-pharyngeal abscess, McCoy, A. W., 574
Philadelphia. Letter from Philadelphia, 518.
Phlegmasia. Four cases of "phlegmasia alba dolens," Williams, H., 581, 586.
"Phonic Paralysis," with rapid respiration, Lawrence, R. M., 57, 88.
Phosphates in food, 15.
Phosphorus. A case of phosphorus-poisoning which could not be diagnosticated either in the living body or from the macroscopic autopsy, Hebra, H., 357.
Phthisis. Advanced phthisis with well-marked physical signs, Flint, A., 217; phthisis, Flint, A., 568, 526.
Physiology. Phosphates in food, 15; food in its relations to development of tissues, Lawrence, 15; forced feeding and overfeeding, 580.
Pietra Santa, P. de. Frozen meats, 582.
Piffard, H. G. Leprosy and its relations to syphilis, 85; calx sulphurata, 280.
Placenta. Its development and its diseases, Norris, A. L., 878.
Plastic Experiments in the abdominal cavity of domestic animals, Billings, F. S., 84.
Plumbing. Siphonage and ventilation of traps, 256, 278.
Pneumonia. On the treatment of pneumonia, Dujardin-Beaumetz, 457, 481, 505.
Poisons. Necrosis from arsenic, Goodwillie, 15; injurious effects of mercury as used in dentistry, Talbot, E. S., 16; unity of poisons in scarlet, typhoid, puerperal, and other infectious fevers, 214: carbolic-acid poisoning, Cabot, A. T., 821: on the habitual use of poisons, Johnson, A. H., 587; a case of phosphorus-poisoning which could not be diagnosticated either in the living body or from the macroscopic autopsy, Hebra, H., 857; lead-poisoning, Flint, A., 861; alarming symptoms from eight grains of potassium iodide, Weist, J. R., 405; intra-venous injections of aqua ammoniæ in a case of sewage-poisoning, 480; death from male fern, 478.
Polypus of nose, fibroid, Seller, C., 18.
Porro's Operation, 285.
Porter, W. Recurrent pharyngeal hæmorrhages, 16.
Portland. Letter from Portland, 165.
Post, A. Water supply of Boston, 564.
Practice of Medicine. Are schools of medical practice to have representatives in the United States Government service? 188.
Pregnancy, Affections connected with. Summary of obstetric cases, Abbott, S. W., 2; recent progress in obstetrics, Richardson, W. L., 82; a case of face presentation in the mento-posterior position, Bishop, G. E., 45; the use of the obstetric forceps, McCollom, J. H., 266; the decrease in deaths from childbirth, 288; a successful case of transfusion, Walter, W., 285; subinvolution of the uterus, 286; the proper use of ergot in obstetrics, Johnson, J. T., 298; the care of the perinæum in the second stage of labor, Parvin, T., 800; notes of twenty-one cases of extra-uterine pregnancy, Thomas, T. G., 804; the use of electricity in extra-uterine pregnancy, Garrigues, H. J., 804; case of triplets, 805; case of difficult labor, Cabot, A. T., 821; tedious labor due to rigidity of the os uteri, Eldredge, T. H., 826; miscarriages, Capron, G., 826; induction of premature labor; manual dilatation; fatal result to both child and mother, Reynolds, J. P., 868, 871; case of protracted gestation, complicated by deformed pelvis and ante-partum hour-glass constriction of the uterus; delivery by version, Dixon, R. E., 868; the placenta, its development and its diseases, Norris, A. L., 878; puerperal septicæmia and localized peritonitis, Nichols, J. H., 886, 896; the management of labor with reference to the prevention of subsequent uterine disease, Forest, W. E., 467; projecting promontory of the sacrum; version; craniotomy, Stedman, C. E., 468; renal trouble in a multipara, complicated with blindness, 470; scarlet fever after confinement, Ayer, J. B., 491; puerperal septicæmia, Minot, F., 491; dystocia; observations on a series of cases, Reynolds, J. P., 516; puerperal albuminuria, Brown, F. F., 579; a case of varicose tumor of vulva, Manton, W. P., 584; certain accidents or abnormal conditions the result of labor, Boardman, W. E., 589; a case of superinvolution, Sinclair, A. D., 589.
Premature Labor. Induction of premature labor; manual dilatation; fatal result to both child and mother, Reynolds, J. P., 868, 871.
Presbrey, S. D. What constitutes a medico-legal autopsy? 818.
Prince, M. Pancreatic apoplexy, with a report of two cases, 28, 85, 55; the bacterium of "red sweat," 586.
Prizes. The French Academy of Medicine's award of a prize to Dr. H. J. Bigelow, 190; the Warren triennial prize, 520.
Prostate Gland. Hypertrophy of the prostate gland, accompanied by profuse and fatal hæmorrhage, Adler, J. M., and Hunt, W., 448; sarcoma of the prostate gland, Hughes, W. E., 528.
Protracted menstruation, Wells, F., 89.
Psoriasis. Taylor, R. W., 280; two cases of acute general psoriasis following vaccination, Rohé, 280.
Public Health Association. An act to prevent the spread of contagious diseases, 67, 402, 428, 450.
Puerperal Albuminuria, Brown, F. F., 579.
Puerperal Septicæmia and localized Peritonitis, Nichols, J. H., 886, 896; puerperal septicæmia, Minot, F., 491.
Putnam, J. J. The relation between poliomyelitis and disseminated neuritis, 495; the treatment of a form of painful periarthritis of the shoulder, 509, 516, 586.
Putnam, S. Alcoholic stimulants in the forming stages of diphtheria, 867.

Q.

Quack's diagnosis, 550.

Rauch, J. H. Texas cattle, 428.
Recent Progress. Surgery, Beach, H. H. A., 6; obstetrics, Richardson, W. L., 82; gynæcology, Baker, W. H., 61; children, Rotch, T. M., 82, 108; chemistry, Hills, W. B., 185; diseases of the throat, Knight, F. I., 177, 208; anatomy, Dwight, T., 228; nervous system, Webber, S. G., 248; dermatology, Tilden, G. H., 818; therapeutics, Williams, F. H., 890, 417; management of lunatic asylums and care of the insane, Channing, W., 441; pathology and pathological anatomy, Whitney, W. F., 464, 518; ophthalmology, Wadsworth, O. F., 540.
Recurrent pharyngeal hæmorrhages, Porter, W., 16.
Red Sweat. Prince, M., 586.
Registration. Fortieth Registration Report, Folsom, C. F., 885.
Relapsing Fever. Observations on an epidemic of relapsing fever, 161.
Respiratory System. Fibroid polypus of the nose, Seller, C., 18; papilloma of the vocal cords, Hooper, F. H., 89; tracheal tumors resulting from tracheotomy, Langmaid, S. W., 59; treatment of irregular heart in pulmonary consumption, Woodbury, F., 142; two cases of empyema, Marion, H. E., 180, 188; removal of naso-pharyngeal tumor, Hooper, 188; tuberculous laryngitis; advanced phthisis with well-marked physical signs, Flint, A., 217; symmetrical signs of basic cavity, Bruce, J. M., 582; the thoraco-plastic operation of Estlander, Fenger, 583: phthisis, Flint, A., 868; rheumatic leucoïnoitis of the pulmonary air tubes, Buckler, T. H., 406; severe disease of the heart, with pleuritic effusion on both sides, Bowditch, H. I., 420; on the treatment of pneumonia, Dujardin-Beaumetz, 457, 481, 505; cirrhosis of the lungs, enormous cavity, hypertrophy of the right ventricle, Shattuck, F. C., 489; chronic parenchymatous nephritis complicating phthisis pulmonalis, Tyson, J., 498; the contagiousness and transmissibility of consumption, 550; phthisis as a self-limited disease, Flint, A., 526; tracheotomy, with a report of three cases, Richardson, M. H., 558; partial asphyxia by hanging; incised wounds of trachea and œsophagus; stricture of larynx; secondary tracheotomy; forcible dilatation of the rima glottidis, Cheever, D. W., 577; a case of bronchocele, Deblois, T. A., 584; tongue and larynx, from a case of elephantiasis Græcorum, Beecher, A. C. W., 590.
Rest Treatment, permanency of the, Page, F. W., 77, 470.
Retinitis. Neuritis, retinitis, and conjunctivitis, Agnew, C. R., 17.
Retro-Pharyngeal Abscess. Errors of diagnosis in retro-pharyngeal abscess, McCoy, A. W., 574.
Reynolds, J. P. Induction of premature labor; manual dilatation; fatal result to both child and mother, 868, 871; dystocia; observations on a series of cases, 516; foreign bodies swallowed, 518.
Rheumatism. Hyperpyrexia in rheumatism, 214; rheumatic leucoïnoitis of the pulmonary air tubes, Buckler, T. H., 406; sciatic rheumatism, Longstreth, M., 601.
Rhode Island. Fourth Annual Report of the Board of Health of the State of Rhode Island, 65.
Rice, J. M. Medical expert testimony, abstract of an address before the Worcester District Medical Society, 26.
Richardson, M. H. Traumatic aneurism, 516; tracheotomy, with a report of three cases, 518, 561; sub-coracoid dislocation of the humerus, 564.
Richardson, W. L. Recent progress in obstetrics, 82.
Robbins, J. H. American dyspepsia, 182.
Roberts, W. A new test for albumen, 574.
Roberts. The treatment of caries in the cervical vertebræ, 881.
Robinson, A. R. Nerves of the skin, 251.
Rockwell, A. D. A case of post-paralytic chorea, with remarks on the treatment of choreaic symptoms in general, 12.
Rohé, G. H. Two cases of acute general psoriasis following vaccination, 280.
Rotch, T. M. Recent progress in diseases of children, 82, 108; thrombosis of the posterior cerebral sinus, 895.
Russell, I. Medico-legal relations of insanity, 557.

Sabine, G. K. The medico-legal relations of chronic alcoholism; its pathological aspects, 460.
Samaritan Free Hospital. Ovariotomy, 70.
Sanger, E. P. Letter from Bangor, 857.
Sanitary problems of Massachusetts, Ames, A., 1.
Sarcoma. Spindle-celled sarcoma of thigh, Simes, J. H. C., 824; sarcoma of the prostate gland, Hughes, W. E., 528: melanotic sarcoma of orbit with metastases to liver, etc., Shakespeare, 528.
Satterthwaite, T. E. The origin and natural history of tuberculosis, 896.
Savage. Porro's operation, 285.
Scarlet Fever after confinement, Ayer, J. B., 491.
Sciatica. Hutchinson, J., 118.
Scott, X. C. Diphtheritic conjunctivitis treated with iodoform, 16.
Scythians, the disease of the, morbus feminarum, and analogous conditions, Hammond, W. A., 14.
Segond, P. Modifications in the calibre of vessels in the stumps of amputated limbs, 451.
Seller, C. Galvano-caustic instruments, 17; fibroid polypus of the nose, 18.
Septicæmia. Puerperal septicæmia and localized peritonitis, Nichols, J. H., 886, 896; puerperal septicæmia, Minot, F., 491.
Sewerage. The sewerage of Brighton, England, 189.
Sewers. Combined sewers, Compton, 424.
Sexual Feeling. Production of the organic climax of sexual feeling apart from any sexual appetite or sexual intercourse, Fifield, W. C. B., 589.
Seymour, W. W. Kerosene as a remedy for favus, 458.
Shakespeare. Melanotic sarcoma of orbit, with metastases to liver, etc., 528.
Shattuck, F. C. Cirrhosis of the lungs; enormous cavity; hypertrophy of the right ventricle, 489.
Sherwood, S. A case of pellagra, 252.
Shoes. The influence of high-heeled French shoes upon the female form, and upon the relations of the pelvic organs, Busey, S. C., 824.
Simes, J. H. C. Spindle-celled sarcoma of thigh, 824.
Sinclair, A. D. Renal trouble in a multipara complicated with blindness, 470; a case of superinvolution, 589.
Small-Pox. The small-pox epidemic in Boston, McCollom, J. H., 845, 858.
Small-pox Hospitals. Report of the commissioners appointed to inquire respecting small-pox and fever hospitals in London, 594.
Smith, G. C. Lymphomatous tumor of mediastinum, 449.
Smoke Test. The smoke test for drains, 208.
Societies. American Academy of Medicine, 447; American Association for the Advancement of Science, 287; American Dermatological Association, 229, 230; American Gynecological Society, 297, 324; American Laryngological Association; American Medical Association, 14, 72; American Public Health Association, 67, 402, 428, 450; American Social Science Association, 260; British Medical Association, 169, 187, 190; Boston Society for Medical Improvement, 444, 489, 548; Boston Society for Medical Observation, 89, 188, 278, 594, 420, 470, 496, 516, 561; Gynæcological Society of Boston, 184, 187, 227, 872; Laryngological Society, New York, 892; Maine Medical Association, 857; Massachusetts Medical Society, 78, 512, 549, 578; Medical Benevolent Society, Massachusetts, 855, 428, 429, 528; National Association for Rural and Sanitary Improvement, 98; Neurological Association, American, 10; New York Academy of Medicine, 869, 896, 467; New York, Medical Society of the County of, 85, 567; New York State Charities Aid Association, 519; Obstetrical Society of Boston, 871,

468, 494, 589; Pathological Society of Philadelphia, 322, 448, 496, 564, 590; Rhode Island Medical Society, 38, 326; Suffolk District Medical Society, 33, 41, 351, 491, 585, 586; Boston Medico-Psychological Society, 614.
Spencer, H. Degenerative tendencies in American life, 477.
Spinal Cord. The effect of nerve stretching upon the spinal cord, Dana, C. L., 14; the somewhat frequent occurrence of degeneration of the postero-lateral columns of the spinal cord in so-called spinal concussion, Edes, R. T., 265.
Spooner, J. W. The relations of the Fellows of the Massachusetts Medical Society to homœopathy and the homœopaths, 73.
Stedman, C. E. Projecting promontory of the sacrum; version; craniotomy, 468.
Stillman, C. F. The surgical mechanics of local joint extension, 200.
Stokes, W. Address in surgery before the British Medical Association at Worcester, August 10, 1882, 169.
Stomach. Function of the cardiac and pyloric portions of the stomach, Dana, C. L., 241; carcinoma of stomach, Musser, J. H., 324.
Storer, H. R. Hospitalism, 374; the Newport system of sanitary protection, 408.
Student. The medical student, 354.
Superinvolution. Sinclair, A. D., 589.
Surgery. Recent progress in surgery, Beach, H. H. A., 6; elastic bandage in the cure of external aneurism, 18; professorship of surgery in Harvard University, 41; teno-synovitis, Hopkins, W. B., 81; address in surgery before the British Medical Association, Stokes, W., 169; concerning the treatment of the wound of President Garfield, Esmarch, F., 234.
Surgical section of the Suffolk District Medical Society, 41.
Sussdorf, G. E. The birth of an elephant, 70.
Sutton. Treatment of the pedicle in ovariotomy, 299.
Syphilis. Leprosy and its relations to syphilis, Piffard, H. G., 35.

Tait, L. Death under ether, 118.
Talbot, E. S. The injurious effects of mercury, as used in dentistry, 16.
Taylor, R. W. Psoriasis, 230.
Tedious labor due to rigidity of the os uteri, Eldredge, T. H., 326.
Teno-synovitis, its causes, nature, symptoms, and treatment, Hopkins, W. B., 81.
Tents at the Boston City Hospital, 91.
Texas Cattle. Rauch, J. H., 423.
Thomas, T. G. Modification of Dr. Thomas's curette, Marcy, H. O., 229; notes of twenty-one cases of extra-uterine pregnancy, 304; introductory clinical lecture on diseases of women, 431.
Thornton, J. K. The relative value of hysterectomy and of the complete removal of the uterine appendages for the cure of uterine fibroids, 302.
Throat. Report on progress in the treatment of diseases of the throat, Knight, F. I., 177, 203.
Throat Mirror, improved, DeBlois, T. A., 35.
Thrombosis of the femoral or iliac veins, Flint, A., 363; thrombosis of the posterior cerebral sinus, Rotch, T. M., 395.
Tilden, G. H. Progress in dermatology, 318.
Tissues. Food in its relations to development of tissues, Lawrence, 15.
Tobacco. The use of tobacco, 501; the use of tobacco by children, 502; the use of tobacco by boys, 520.
Tonsils. Excision of the tonsils, Mackenzie, 398.
Torticollis. Bradford, E. H., 87.
Toy Pistols. Five cases of gunshot wounds of the palm, from blank cartridges, followed by tetanus and death, Ingalls, W., 85; traumatic tetanus, Millet, C. S., 86; toy pistols and tetanus, 90; a case of traumatic tetanus, Fuller, F. B., 117.
Tower, C. C. Report of a case of homicide, 436.
Trachea. Tumors resulting from tracheotomy, Langmaid, S. W., 39; tracheotomy, with a report of three cases, Richardson, M. H., 553, 561.
Transfusion. A successful case of transfusion, 285.
Transposition of the viscera, 406; transposition of the viscera, Wilson, H. A., 435.
Traumatic Aneurism. Richardson, M. H., 576.
Trichinæ. The action of salt on trichinæ, Fourment, 358.
Triplets. Case of triplets, 305.
Tubercle of the larynx, Cohen, J. S., 392; the origin and natural history of tuberculosis, Satterthwaite, T. E., 396; contagiousness of tubercular consumption, Cogshall, 424.
Tumor. Notes on twelve cases of brain tumor, chiefly with reference to diagnosis, Mills, C. K., 10; tumor of the base of the skull, Connor, 17; fibroid polypus of the nose, Seiler, C., 18; tracheal tumors resulting from tracheotomy, Langmaid, S. W., 39; fibro-myoma of uterus, Elliot, J. W., 151, 159; fibroid tumor of the uterus, Chadwick, J. R., 183; removal of intra-uterine fibroids, Clark, A. P., 226; lymphomatous tumor of the mediastinum, Smith, G. C., 449; myxomatous tumor of the posterior cervical region, MacConnell, W. G., 496; spindle-celled sarcoma of the small intestine, Edwards, W. A., 498; A case of varicose tumor of vulva, Manton, W. P., 584.
Tuttle, G. T. A case of general paralysis, 612, 614.
Typhoid Fever. Ergotine in typhoid, 212; "threatened with typhoid," 279, 302; "threatened typhoid," Bishop, P. E., 330; "breaking up typhoid fever," Whitney, J. O., 408; typhoid fever and malaria, 478; typhoid fever and sewer gas, Otis, E. O., 589.
Tyson, J. Chronic parenchymatous nephritis complicating phthisis pulmonalis, 498.

Urethra. A new method of exploration, with the pathology and treatment of certain lesions of the female urethra, Emmet, T. A., 303.
Urinary System. Clinical lecture on Bright's disease, Flint, A., 193; glycosuria, DeWolf, O. C., 219, 247; erythroxylon coca, its physiological effect and especially its effect on the excretion of urea by the kidney, Mason, A. P., 221; the hereditary tendency to Bright's disease, 286; a new method of exploration, with the pathology and the treatment of certain lesions of the female urethra, Emmet, T. A., 303; perinephritic abscess, Cabot, A. T., 321; Bright's disease, Flint, A., 361, 363; clinical observations on albuminuria, Meigs, A. V., 409; hypertrophy of the prostate gland accompanied by profuse and fatal hæmorrhage, Adler, J. M., and Hunt, W., 448; caseous degeneration of the kidneys, Dunmire, 448; renal trouble in a multipara, complicated with blindness, 470; frequent and painful micturition from vascularity of the neck of the bladder, Baker, W. H., 494; chronic parenchymatous nephritis complicating phthisis pulmonalis, Tyson, J., 498; sarcoma of the prostate gland, Hughes, W. E., 593.
Uterus. Fibro-myoma of uterus, Elliot, J. W., 151, 159; punctured wound of the pregnant uterus, Baer, B. F., 261; inversion of the uterus of eight years' duration, Cyrus, W. H., 263; subinvolution of the uterus, 286; two successful cases of removal of uterus and appendages, Gerrish, F. H., 289; the relative value of hysterectomy and of the complete removal of the uterine appendages for the cure of uterine fibroids, Thornton, J. K., 302; the mechanical therapeutics of versions and flections of the uterus, Van de Warker, E., 325.

Vacation. The summer vacation in the public schools, Jacobi, A., 566.
Vaccination. Accidental vaccination of the eye, Calhoun, 17; two cases of acute general psoriasis following vaccination, Rohé, G. H., 230; vaccination after variola; effects of vaccination and revaccination, Wells, F., 394; uses and abuses of vaccination, Abbott, S. W., 423.
Vaginal Douche. Gerould, J. B., 561; Baker, W. H., 614.
Vaginal Ovariotomy. Baker, W. H., 395; vaginal douche, Gerould, J. B., 561.
Van de Warker, E. The mechanical therapeutics of versions and flexions of the uterus, 325.
Venereal Diseases. The routine treatment of venereal diseases, Greenough, F. B., 146, 160, 175; the prevention of syphilis, 161; venereal diseases, 425.
Ventilation in the lying-in room, Minot, F., 494.
Vertebræ. The treatment of caries in the cervical vertebræ, Roberts, 331.
Veterinary Medicine. The new school of veterinary medicine, 306.
Vocal Cords. Papilloma of the, Hooper, F. H., 39.
Vomiting. Treatment of vomiting by abstinence from food and medicine, Webber, S. G., 180.

Wade (Birmingham). The address in medicine before the British Medical Association, 190.
Walter, W. A successful case of transfusion, 285.
Warren, J. Collins. Excision of the wrist-joint, 388.
Wadsworth, O. F. Optico-ciliary neurotomy, fifteen cases, 254; recent progress in ophthalmology, 540.
Warren, J. W. Notes on progress in physiological chemistry, 294.
Warren triennial prize, 520.
Washington. Letter from Washington, 139.
Water. Bad drinking water and politics, 116; the regulation of sources of water supply in thickly populated districts, 187; the liability of corporations for supplying impure water, 286; physicians interested in the Boston Water Commission, 452; Boston water and the Water Commission again, 475; water supply of Boston, Post, A., 564; the water supply of Boston, Barnes, H. J., 585; the city water, Bowditch, H. I., 621.
Webber, S. G. Treatment of vomiting by abstinence from food and medicine, 180; report on progress in the pathology of diseases of the nervous system, 248; a case of Bright's disease treated by pilocarpine, 390, 395; cerebral anæmia and exhaustion, 415, 421; abnormal distribution of arteries at base of brain, 543.
Weist, J. R. Alarming symptoms from eight grains of potassium iodide, 405.
Wells, F. Protracted menstruation, 39; correction, 118; vaccination after variola; effects of vaccination and revaccination, 394.
Wheeler, W. G. A brief glance at some of the border lines in the gynæcic medicine and surgery of to-day, 184.
White, J. C. The contagion of leprosy, 251; report of committee on statistics of cases of skin disease, 252; an experience in skin disease, 252; old age of the skin, 484, 489.
Whitney, H. B. Percussion of the heart in health and disease, 270.
Whitney, J. O. "Breaking up typhoid fever," 408.
Whitney, W. F. Recent progress in pathology and pathological anatomy, 464, 513.
Wight, O. W. Compulsory reports of cases of infectious diseases and deaths, 425.
Williams, E. T. "Threatened with typhoid," 332; a proposed change in the method of examining candidates for the Massachusetts Medical Society, 512; the censor question of the Massachusetts Medical Society, 573.
Williams, F. H. A study of the action of iron, 105; report on progress in therapeutics, 390, 417.
Williams, H. Four cases of "phlegmasia alba dolens," 531, 568.
Wilson, T. P. Life on wheels, 423.
Wilson, H. A. Autopsy of a case of transposition of the viscera, 435.
Wirgman, C. Case of carcinoma mammæ, 322.
Woodbury, F. Treatment of irregular heart in pulmonary consumption, 142.
Women. London Medical School for Women, 597.
Worcester. The new city hospital at Worcester, Mass., 212.
Wrist-Joint. Excision of the wrist-joint, Warren, J. Collins, 388.
Yale College. Thermometric bureau of the Yale College observatory, 94.
Young, H. G. Communicable eye disease, 18.

Original Articles.

SOME SANITARY PROBLEMS OF MASSACHUSETTS.[1]

BY AZEL AMES JR., M. D., WAKEFIELD.

George Eliot, in her novel of Middlemarch, has represented her young philosopher-physician, Dr. Lydgate, as "a man who believed that masses are influenced and moved only as individuals are affected and convinced." Probably no man more fully appreciates and subscribes to this truth than the intelligent physician in every community. With him the every-day observation bears witness to the effect the individual has had in the moulding of family and neighborhood, in casting the lines of society and the body politic. To him more than to most it is given not only to observe, but to himself mould the moulder, to give stimulus and direction to much of the vital thought and movement of men and communities.

The day has happily dawned when the physician has come to be thought of as somewhat more than the vender of pills and powders, more than the alleviator of pain.

In the language of Goethe, "he has stamped his value on himself, the price he has *challenged* for himself has been given him," and both the citizen and the State have come to think of him as holding the keys of a wider knowledge than that of physic, and now call him in counsel upon the problems that lie at the foundations of human happiness, and of the prosperity of the Commonwealth.

The physician's unselfish, ardent promotion of sanitary knowledge, notwithstanding its sure effect upon the practice from which comes his livelihood, furnishes a rare spectacle in this self-seeking world, and establishes alike his claim to philanthropy, and to the right to advise upon measures for the public good.

It is because I am myself sure of this unselfish philanthrophy, and of the physician's influence upon the individual and so upon society; because I realize his opportunity of dropping "here a little and there a good deal" of the seed of truth into the ears of the masses, and because his voice is now heard, as never before, in the halls of legislation, and in the council chamber, that I venture to-night to ask attention to a few of the sanitary problems of Massachusetts as they present themselves to my mind, although in crude form, and to bespeak for them earnest consideration, and such action as their importance invites.

Just as a man's life is the measure and test of his belief, so the health of a State becomes sooner or later the measure and test of its prosperity. For in the physical power of its inhabitants to labor and earn lies all its power of accumulation, and from these spring its facilities for mental and moral growth and enjoyment.

The considerable increase of numbers means always war upon those pristine conditions of purity which exist in the elements before man's interference upsets the regulating and well-balanced alchemy of nature.

A State that, in an area like that of Massachusetts, has gathered a population of more than a million and a half, who daily contribute to its atmosphere, land, and waters, the great pollutions of their economies and of the manufactures by which they live, must inevitably contemplate the certain and steady advance of diseases, that, whatever the media of their propagation may be, surely attend the cumulative pollutions of air, water, and soil.

Cities and towns of constantly increasing population and manufactures have occupied the valleys of our streams, and skirt the borders of large lakes and ponds. The waters of river and lake, once pure, and even now the sources of domestic supply, are being rapidly contaminated, and in not a few instances the same stream is both the source of water supply and the receptacle of sewage.

Nor is this all. By the rule of "first come first served," which has become the law of the State, the great sources of water supply have been given to the first applicant, often a city or town of small present or prospective needs, while the larger contiguous city, whose rights in the water supply granted were as inalienable as its needs were greater, has found itself, when its necessities called, left out in the cold. The prime sources of water supply held under eminent domain by the State have nearly all been granted; but a few — and these the lesser — remain to be ceded. Their assignment has been made almost wholly on the basis of the contiguity of the city or town applying therefor, as was natural, and without other regard to the fitness of things. Small places now control great and invaluable sources, of capacity far beyond their remotest possible needs, while great and growing cities and towns have been narrowed to the assignment of small, ill-situated supplies, and are exhausting every device for more, while the superabundance of their neighbors sparkles in their view as tantalizingly as to the eyes of the Ancient Mariner, there was, —

> "Water, water everywhere, and not a drop to drink."

Soil pollution will always exist to greater or less extent, and will, of course, be cumulative as numbers and trades multiply. Even when sewers exist to convey away the worst and greatest contaminations, the soil in the neighborhood of man's abodes can never be pure. A pure water supply cannot come from an impure soil, and an impure water supply contains the maximum of baleful power. If the source of the domestic water supply be pure a considerable pollution of soil and air is tolerated, and though not with impunity, at least with less danger.

It is evident that the first general sanitary need of a community is an abundant supply of pure water.

I have stated that in Massachusetts two facts unfriendly to the universal possession of this pure and abundant supply exist.

First. The rapid and increasing pollution of the great sources of supply, and second, the unequal assignment by the legislature of these sources.

That the necessity of remedy is all important is only too apparent.

Does the power of remedy exist? To a great degree I believe it does.

What, and where is it?

While I believe there is a tendency with us to too much dependence upon government, in some things it becomes necessary to invoke the far-reaching and powerful arm of law, and in no other way can the willful or negligent pollutions of water courses be reached.

I say willful and negligent, as opposed to natural and inalienable rights of drainage which must be met not by mandate alone, but by other adequate provisions, and it is both a fact and an argument that the great contaminations of lake and stream come to-day from the natural drainage of areas settled by communities long before the adjacent waters were thought of for the domestic needs of the remote cities now using them.

---

[1] Read before the Middlesex East District Medical Society, May 3, 1882.

It may as well be said here as later, that just as we have come to recognize that heating and ventilation cannot be considered apart, so neither can water supply and drainage, at least so far as the Commonwealth is concerned.

The eastern part of Massachusetts is to-day very generally underlaid by the reticulated systems of water-pipes of closely adjacent towns and cities. A comparatively small expense would connect these several pipe systems or join certain of them in groups so that the supply of each might be common to all. Thus the utter inadequacy of supply of some could be reënforced at pleasure from the superabundance of others, and the serious disabilities now so often imposed on city or town by the necessity of repairs or cleansing, low water, breakage of reservoirs, mains, or machinery, special accidents or pollutions, would no longer occur.

To stop the willful or negligent pollution of sources of water supply stringent legislation is necessary. To divert the natural and prescriptive drainage of areas from their original flow into streams and lakes now used as sources of water supply, comprehensive legal authority must exist. To control, connect, and group the water supplies and pipe systems of numerous towns and cities, new and great powers must be vested; new organizations constituted, — and the legislature alone can do this.

It is evident, therefore, that it is to the same power that we must look for remedy that has, in part at least, built up the errors we seek to remove.

So much as affecting the question of water supply.

Water, once put to the uses of man, and hence more or less impure, must find removal more or less direct to its great *omnium gatherum* — the sea.

In short, when water has become sewage its disposal is only second in importance to its original acquirement.

The sewerage of Massachusetts as it exists to-day is hardly worthy of the name. Grown like the communities which have built it, little by little, incongruously, upon no perfected plan, it barely serves to temporarily pass from sight, and the immediate neighborhood of men's abodes, the foul flow it contains. It is only within the last few years that, in a few of the large cities, definite and comprehensive plans have been considered and in part constructed.

Wholly inadequate to the population and the volume to be provided for, the inevitable results have been and are, first, that the soil is being steadily saturated with pollution, doing a sure and certain work in the generation of disease, and second, that streams needed at their best as water supplies are forced to do duty, like the Charles, the Sudbury, and the Mystic, both as water sources and sewers. Both the great water dependencies of the city of Boston, — likely to double its population in the next two decades, — are to-day so endangered by this double service of their flow that an efficient and speedy remedy is demanded.

The water courses to the sea, even in a fairly watered country, are not numerous, and, as has been said, their prime value is as purveyors of *pure* and not as *carriers* only of *impure* water. Few of them are conditioned, located, or meet the ocean favorably, for the latter service alone. Nothing, however, seems more probable than that some of the streams of Eastern Massachusetts — like the lower Sudbury — must be set apart as sewage carriers only. The sea-coast is yearly assuming new value as it is occupied for summer resorts, at large expense, as at Nantasket and Point of Pines, while every harbor is now guarded with a most watchful and jealous eye by the Harbor Commission. The stream condemned as a water carrier will have to run the gauntlet of acrimonious criticism from its point of beginning as a conduit to its commingling with the deep tidal waters off the coast.

Each city and town has built its meagre sewerage according to its own topography, circumstances, and misconceptions — largely upon the latter. The sewage of each must go *somewhere*. If to the neighboring stream, it may be only to be set back by the next tide, to close proximity to the inlet pipe of the water works of its neighboring town; if into the lake, upon the sloping borders of which the town was years since built, then the reservoir of the great city that owns it must be poisoned; if into the sea at the nearest point, then summer resort, Harbor Commissioner, and Board of Health complain. Like the "ugly duck," it is wanted nowhere.

Reluctantly, but pretty definitely, sanitarians have come to believe that any attempt, in the light of present knowledge, to secure profit from the utilization of sewage is hopeless, except in rare instances, and on a small scale. Of the methods available for its utilization, its return to the land by intermittent downward filtration or irrigation alone promises satisfactory results, and this for the sewage of small or inland towns, will, undoubtedly, in the future, be more and more employed. But to remove the willful pollutions that in the consideration of water supply we found contaminating our present sources; to take out of our rivers and lakes the natural drainage contaminations; to keep from the soil about us, or the streams that are water sources, the sewage of our thickly settled towns and cities; to relieve our harbors and our beaches, new, ample, and far-reaching channels must be had, providing in place of the water-courses now contaminated special conduits for their harmless flow to proper outfalls in the deep tidal waters. Just as has been indicated, the apparent necessity of purifying and connecting or grouping the water supplies of the State in commonalty, so, but even more clearly, is indicated the need of purifying the soil and gathering together in new channels the sewage of the net-work of cities and towns of Eastern Massachusetts, and its removal in commonalty beyond power for harm.

That I have roughly sketched — as a boy might draw a picture on a slate — the outline of a gigantic undertaking, I am well aware. That I have contemplated no less than the comprehensive water supply and drainage of the most densely populated part of the most densely populated State of the Union, I also know, but great as the undertaking and expense must be, radical, almost, as the movements must be that it contemplates, I still ask any of you, looking the facts as we all know them full in the face, must not *some* remedy be found for these fast-growing and incalculable evils? And is there any other road out of them? This much any intelligent man may ask. Master minds must recast the outline and fill in detail. Whether the cordon of rivers and lakes that encircle the municipalities of Eastern Massachusetts, if purified and connected, so that the resources of each group may be available to all its members, would then furnish adequate supply for the coming years of portentous growth is a further question. Whether it may not be that, leaving to manufacturers and to lesser domestic demands the present supplies, the chain of cities and large towns stretching northward from Boston, in two States, may not find it necessary to join the metropolis in bringing the great lake of New Hampshire to our doors, remains as a further problem. Water in abundance, *pure* water must be had. It is *life*, and all that a man hath will he give for his life.

What streams shall be freed from the befoulments of man and of manufactures, and what relegated to Stygian blackness in their service as sewers, men qualified to determine and clothed with power to decree must say. What valleys shall be drained, what routes the great sewer conduits shall follow, what irrigation fields be established, what outfalls reached, and a thousand questions of hardly less import must be settled.

More than all, municipalities to whom rights have been given must be divested of those rights and dispossessed of their property, must be compelled to relinquish for the common good that which they have enjoyed for their own, and be made to bear a part in burdens that benefit others beside themselves. It goes without saying that for such mighty enterprises and such grand schemes there must exist great powers, and that they must be vested in a central and competent authority.

Sooner or later, perhaps by a devious road, and as the ultimate joining of several previous commissions and their labors, I believe we shall have a conservancy board of water supply and drainage for the Commonwealth. That it will be the legitimate and worthy successor of the several water and drainage commissions that may precede it is most probable, but that it must come I entertain no doubt. It took a hundred years of the sanitary woes of London after attention was turned to them, to produce the Metropolitan Board of Works and the Thames embankment. It may take fifty in our advanced state of knowledge to secure our own conservancy board, and the legal foundation for it to stand upon, but sooner or later I believe it will come, because *it must.*

Already a long stride has been taken in the creation of the Metropolitan Drainage Commission of last year, charged with the draughting of a plan for the drainage of the Charles and Mystic River Valleys and the immediate vicinage of Boston. Among the apparent facts developed by its inquiry were, not only the entire feasibility of the drainage of the area named, but that it could be accomplished in such manner as to very generally take on without special pumping the existing systems of most of the cities and towns of the area; that the great water basins of Boston would be almost wholly freed from contamination; that the flow of Pegan Brook, so long a source of annoyance to Boston, could be provided for; that the needs of the outlying city of Lynn could be included; that towns lying off the shed of the valleys named could be included at small expense; that irrigation plans would meet the needs of certain small towns; that the total expense when divided upon the property of the municipalities benefited would not be burdensome; that a direct tax would remove all difficulties of apportionment; and that the rivers of the district would, with a single exception, be made wholly available for water supply while the vested rights of sewerage therein would be provided for.

That a commission, given but six months time in which to work and an appropriation of but three thousand dollars, albeit aided by previous inquiries, should have been able to reach conclusions covering so much and so important ground is the most hopeful augury for the work of a future commission with ampler time, means, and scope.

The extensive litigations attending the construction of the water basins of the Sudbury, the discharge of Pegan Brook, the pollution of the Mystic and the Blackstone, and the water supply of Wakefield, with others, are additional arguments for speedy and comprehensive reference of these matters to central and competent authority, able to administer in the interests of all.

I commend to that careful consideration, which the members of this Society are wont to give matters of such importance, these allied matters of general water supply and drainage, so nearly affecting every one of us.

A SUMMARY OF OBSTETRIC CASES.

REPORTED BY MEMBERS OF THE MIDDLESEX EAST DISTRICT MEDICAL SOCIETY, AND COMPILED BY DR. SAMUEL W. ABBOTT.

During the thirty years or more of its existence as an organization the Middlesex East District Medical Society has striven to cultivate and encourage among its members habits of systematic observation, for the purpose of individual and mutual improvement, and also for the general advancement of medical science.

Individual observation forms the basis of a large portion of all statistics in medical science, and it is a part of the duty of every medical man who draws something from the general fund of medical knowledge to contribute his share in return. In view of this fact committees on Therapeutics, Systematic Observation, and Obstetrics have been appointed who have collected the experience of this Society in these departments, so far as possible, from the voluntary contributions of members, and rendered occasional reports, many of which have been published in past years.

The work of collecting the Records of Obstetric Experience was begun as early as January, 1855, and intrusted to the secretary of the Society, Dr. William Ingalls, who faithfully performed his duty of compilation from that time till 1861. These reports were published in the Boston Medical and Surgical Journal in 1857, 1858, *et seq.*, and comprise a summary of 2256 cases.

The sudden outburst of the rebellion called away the secretary, Dr. Ingalls, and other active members of the Society to service in which obstetric reports were out of the question. Hence their discontinuance for a season. In 1875 these reports were renewed, and have been continued to the present time.

About twenty-five physicians have contributed to the earlier and the later series of reports. The number of reporters has not been more than thirteen in any one year, and an average of ten annual reports has been received.

The blanks used in the later series contained the following items: —

(1.) Nativity of mother. (2.) Nativity of father. (3.) Age of mother. (4.) Previous births. (5.) Miscarriages. (6.) Date and hour when born. (7.) Waters broke. (8.) Duration of pain. (9.) Presentation. (10.) Sex. (11.) Instrumental labor. (12.) Anæsthetics. (13.) Nursed or artificially fed. (14.) Alive at end of year so far as known. (15.) Weight of child.

It is regretted that all items of information in the following summary are not uniformly complete.

Perfect accuracy can hardly be attainable in a report made up of the experience of several individuals, each of whom has his own standard in matters of observation.

Different physicians attach a variable degree of importance to the different items of a report. For example, it is the habit of some to weigh every child personally at its birth. Others never do it except when requested by the parents.

The total number of labors reported in the later period, from 1875 to 1881 inclusive, is 2666, making, with those formerly reported, a total of 4922 cases, the statistics of which have been collected by this Society. The total number of children born, and included in the later series, was 2709. Included in this number were 39 cases of twins and two of triplets. Percentage of plural births 1.53 per cent., or one in 65. Percentage of twin births 1.46 per cent., or one in 68. Percentage of triplet births one thirteenth of one per cent., or one in 1333.

The last figures must be regarded as purely accidental, and would not be likely to rule in a series of 50,000 or 100,000 cases, the normal percentage of triplets being very much smaller.

SEX OF CHILDREN.

There were 1379 males, 51.3 per cent.; 1306 females, 48.7 per cent.; 24 not recorded.

The population from whom these statistics are derived is such as may usually be found in thriving New England towns, country villages, and small farming districts.

The nationality of parents is as follows: —

	Fathers.	Mothers.
Of United States origin	1526	1561
Of Ireland	785	778
Of British Provinces	178	177
Of England	59	49
Of Scotland	23	23
Of Germany	16	14
Of France	18	15
Of French Canadian	12	13
Of Sweden	13	16
Of Negro	9	8
Of Portugal	2	–
Of Spain	1	1
Of Wales	1	1
Of Denmark	3	1
Of Holland	2	–
Of Madeira	1	–
Of Mongolian	1	–
Of Turkey	–	3
Of Calcutta	1	–
Nativity unknown or not recorded	14	5

NUMERICAL STATEMENT OF BIRTHS.

Of primiparæ there were	771
Of second births there were	535
Of third births there were	408
Of fourth births there were	316
Of fifth births there were	214
Of sixth births there were	130
Of seventh births there were	106
Of eighth births there were	63
Of ninth births there were	38
Of tenth births there were	23
Of eleventh births there were	8
Of twelfth births there were	11
Of thirteenth births there was	1
Of fourteenth births there were	2
Of fifteenth births there was	1
Not stated	42

HOURS OF BIRTH.

There were born between midnight and six o'clock A. M. 716 = 28.8 per cent.; six A. M. and noon 632 = 25.4 per cent.; noon and six P. M. 548 = 22.1 per cent.; six P. M. and midnight 587 = 23.6 per cent.; unrecorded 226.

TIME OF THE YEAR.

January, 232; February, 194; March, 224; April 202; May, 217; June, 206; July, 241; August, 277; September, 219; October, 226; November, 219; December, 227; not recorded 25.

INTERVAL BETWEEN RUPTURE OF MEMBRANES AND BIRTH.

There were 2241 cases recorded; average time two hours and forty-seven minutes. From this estimate were excluded all cases of abnormally long interval (two days or more), 39 in number. Longest interval fifteen days. About 150 were coincident with birth.

DURATION OF PAINS.

Observations were made in 2498 cases. Average duration nine hours fifty-nine and one half minutes. Longest seven days. Unrecorded 168. A portion were recorded by nationality. There were 685 observations of United States mothers, average ten hours eighteen minutes; 337 of Irish mothers, average ten hours thirty-one minutes; 81 of British Provinces, average nine hours twenty minutes.

PRESENTATIONS.

There were 2613 observations made. Of these 2512 were cephalic, or 96⅛ per cent.; 2462 were vertex, or 94⅛ per cent.; 33 were face to pubes; five were face; seven forehead; one was anterior fontanelle; one was vertex to pubes. Podalic presentations 80, or three per cent. Of these 67 were breech and 13 footling. There were also eight of the arm, four of the shoulder, two of the elbow, three transverse, and eight of the funis. Of the latter at least three are included among other presentations. Unrecorded 96.

ANÆSTHETICS.

Observations made as follows: Anæsthetics given in 325 cases, or 12 per cent. In 323 ether was used and in two chloroform; chloral was used in a few cases only. Amount of ether given varied from one half an ounce to three pounds.

INSTRUMENTAL CASES.

The forceps were used in 173 cases or 6.5 per cent. Version was used in 39 cases. The fillet was used in 2 cases. The vectis was used once. Embryulcia was performed once, and the battery was used in one case of inertia of the uterus.

LACTATION.

Number of observations, 1231. Of this number 1076 were nursed, and 155 were artificially fed. Of the former 29 died before the close of the year, or 2.7 per cent.; of the latter 24 died, or 15.5 per cent.

WEIGHT.

Observations were made in 224 cases of naked infants. Average weight of all, 3788 grammes. Average weight of males, 3900 grammes; average weight of females, 3657 grammes.

All observations of this item should be taken from the naked child immediately after its birth, the weighing being done by the attendant. Reliance should not be placed on the statements of parents, which are usually over-estimated.

LENGTH.

There were 31 observations made, with an average of 49.3 centimetres. Seventeen males averaged 49.81 centimetres; fourteen females averaged 48.66 centimetres.

MORTALITY OF INFANTS.

From all causes existing at or before birth, or before the close of the year in which each child was born, there were in all 273 deaths, or 10 per cent., from the following causes: —

Still birth, 35. Premature birth, 60. Difficult labor, 34. Cyanosis, 3. Anencephala, 7. Anencephala with spina bifida, 1. Spina bifida, 3. Cholera infantum, 14. Debility and puerperal convulsions, 3 each. Imperforate rectum, contracted or deformed pelvis (mother), premature separation of placenta, placenta prævia, erysipelas, and overlying, 2 each. Intussusception, descent of funis, dyspnœa, fibro-cystic tumor of uterus, icterus, and umbilical hernia, cephalhæmatoma, knot in funis, syphilitic degeneration of placenta, membranous croup, phthisis pulmonalis, malnutrition, and difficult dentition, 1 each. Causes not stated (mostly still-born), 74.

MORTALITY OF MOTHERS.

There were 19 deaths from causes immediate and remote, or .7 of 1 per cent. From embolism, 3. Puerperal peritonitis, 4. Puerperal septicæmia, 2. Phthisis 2. Puerperal convulsions, post-partum hæmorrhage, chronic puerperal septicæmia, uræmia, renal disease, erysipelas, rheumatic endocarditis and puerperal anæmia, 1 each.

DEFORMITIES OF EMBRYO.

Imperforate rectum, 2. Anencephala, 7. Hydrocephalus, 2. Spina bifida, 4. Umbilical hernia, 1. Nevus (requiring operation), 3. Cephalhæmatoma, 4. Extra digits, 2. Shortening of tibia and fibula, 1. Short funis, 2, one eight inches, one nine and one half inches.

MATERNAL INCIDENTS AND ACCIDENTS.

Lacerated perinæum, 69 (of which 5 were thought to be sphincter ani; 33 are recorded as having been stitched). Retained or adherent placenta, 14. Phlegmasia dolens, 8. Post-partum hæmorrhage, 21. Puerperal convulsions, 14. Mammary abscess, 13. Placenta prævia centralis, 2. Placenta prævia partial, 5 (one of the latter was in a case of twins, both of which were born alive). Vesico-vaginal fistula, 2. Ante-partum hæmorrhage, 3. Hour-glass contraction, 2. Impacted rectum, 1. Extensive condylomata (requiring removal), 1. Puerperal mania, 1. Metritis, 2. Rupture of cervix uteri (?), 1. Hemiplegia (with recovery), 1. Labor induced at eighth month for contracted pelvis, and version performed, 1. Labor induced at sixth month for incessant vomiting, 1. Labor induced at sixth month for epileptic convulsions, 1. Puerperal fever (or septicæmia), 4. Intra-uterine tumors complicating pregnancy, 3. Albuminuria without convulsions, 1. Malarial fever (post-partum), 1.

REMARKS ON SPECIAL CASES.

Case I. The mother, a healthy woman, during the eighth month of pregnancy, fell down a long flight of stairs, with a child two years old in her arms, the mother fracturing her scapula, but went to the full time, neither the born nor the unborn child suffering any harm.

Case II. "At seven months this patient had diminished vision for two or three weeks, dimness gradually increasing. She could not see for a few days to cut up children's food. Threatened labor; severe headache at same time, lasting two days. At five P. M., November 28, 1879, she had, while alone with her children, pain, hæmorrhage, and some sort of spasmodic attack, no clear account of which could be obtained. If it was a convulsion it was light. No convulsion after I saw her. Found her at 6.30 P. M. nearly pulseless, sighing, delirous, blanched, with appearance of alarming hæmorrhage. Pupils dilated and blind; blindness continued all night; pupils dilated several days. Consciousness returned during the night. Ruptured the membranes. Drew the urine, which was scanty and albuminous.

"Cord pulseless. Following the babe, and preceding the placenta, was a black clot weighing, I should think, two pounds, shaped as if moulded between fœtus and uterine walls. No hæmorrhage after the birth of the child or placenta.

"Albumen in small amounts was found for a week or two. Vision slowly improved. Two months after she could read coarse print with difficulty. Is still pale, anæmic, feeble."

Case III. "The mother had five labors, and placenta was adherent in four."

Case IV. "Labor, as marked by a gush of water and dilatation of os, began four hours before she felt a pain, and a single pain brought the child and placenta through the vulva still-born. The child's legs extended and anchylosed at the knees. The third still-born child she has borne in succession."

Case V. "Difficult labor from disproportion of soft parts to head of child. At two P. M. applied forceps with ether, head being then above the brim. In two hours had only succeeded in getting head as far as perinæum. At six P. M. child was delivered, and placenta immediately after. Perinæum ulcerated to sphincter ani; two sutures; no union. Much vaginitis and tympanitis followed, with high fever, but no peritonitis. On fifth day after tympanitis and vaginitis had nearly subsided, erysipelas of face set in, proving fatal on eighth day. The child gasped but once."

Case VI. "Right hand and shoulder presentations; membranes ruptured; patient placed in knee elbow position; hand and shoulder returned and head brought into position and labor terminated normally; child alive."

Case VII. "Patient Irish; aged thirty-six; third labor; has always had severe labors terminated by forceps; has one living child. Taken in labor September 11th. Her attendant found a face presentation, which afterward, as labor progressed, presented a soft tumor on the top of the child's head, which was not very large and having the feeling common to anencephalous embryos.

"Labor progressed; child was alive; tried forceps; they would not hold; sent for consultation, knowing the child was a monstrosity. A fillet was secured around its neck, and traction made for an hour without avail, the shoulders being of monstrous size. The head was then amputated to make more room, and one enormous leg brought down. There was not room to bring down both at once, and this leg was severed from the trunk by means of scissors and scalpel. The other leg was then brought down and child delivered, weighing fourteen pounds. The child was not as long as the average, but very stout and broad.

"Mother made a good recovery, and was delivered a year afterward of a very large child.

"Her successive children weighed, naked, twelve, thirteen, fourteen, and thirteen pounds."

Case VIII. "Patient a French Canadian, aged thirty. Vagina crossed by cicatricial tissue. No os uteri to be found by prolonged search. Finally, the pains being strong for hours, I tore an opening through the thinnest part, through which could be felt the head.

"Dilated the opening with fingers, and delivered with forceps. Cord prolapsed and child dead.

"In her two previous labors I went through the same process. The second resulted in a living child, the first a dead one.

"Condition of vagina was produced by delayed labor in first confinement under an ignorant midwife. After three days' labor I was sent for, and delivered a dead child with forceps.

"Retention of menstrual blood has once occurred; relieved by puncturing where the os uteri was supposed to be."

Case IX. Another reporter gives the following statement: —

"The year 1880 was a singularly unfortunate one in my obstetric practice, which is not an unusually large one for a country practitioner. In the course of six weeks in May and June, I met with the following cases: One case of puerperal convulsions, attended with albuminuria, and followed by a prolonged attack of phlegmasia dolens in one leg.

"One case of puerperal septicæmia, fatal in twelve days after delivery.

"One case of puerperal peritonitis, fatal in seventeen days after delivery.

"One case of placenta prævia (central) followed by puerperal peritonitis, and death in five days after delivery.

"Two cases of mammary abscess, one very severe, with prolonged anæmia, ten or twelve openings, and profuse suppuration.

"Two mild cases of puerperal fever, not fatal.

"After a season of two months' refusal of all obstetric practice and rustication, occurred the following: —

"One case of phlegmasia dolens, severe in both legs.

"Two cases of severe lacerated peritonæum, occurring within one week, both clear through the sphincter; one of them extending a long distance up the recto-vaginal septum.

"Fortunately both these cases recovered by union by first intention, after immediate stitching with silver wire."

This reporter is convinced that the best and surest course for an obstetrician in case of a run of puerperal septicæmia, or kindred diseases, is a complete seclusion and refusal of all obstetric practice for a definite period, at least one month.

RECENT PROGRESS IN SURGERY.

BY H. H. A. BEACH, M. D.

SPONGE GRAFTING.[1]

Dr. Hamilton's interesting paper upon this subject was quoted from in the last surgical report; since then, Mr. Rhodes, of the Huddersfield Infirmary, has submitted a patient to the process with success.

The ulceration was situated on the face of a boy and measured four inches in length, two in its greatest breadth, and was one third of an inch deep. A slice of sponge was prepared according to Dr. Hamilton's direction and applied to the surface. On the eighteenth day after the application of the sponge, it had disappeared with the exception of some very small particles; in its place a mass of healthy-looking granulations could be seen projecting above the level of the skin. Four days later the patient was discharged, the wound having nearly cicatrized.

LARYNGOTOMY.[2]

In a recent discussion Despres, in opposition to the view that laryngotomy is an easy operation and without danger compared with tracheotomy, reported two cases where death seemed to be connected with the operation. Verneuil defended the operation, and claimed that tracheotomy was a very dangerous procedure in the adult.

Farabeuf maintained that the death in Gosselin's operation (one of the two cases reported by Despres) was due to the malignant disease for which the operation was performed.

ANTISEPTIC LIGATURES.[3]

Six large arteries, including the brachial, subclavian, common carotid (the two latter simultaneously), the external iliac, and the femoral (twice).

The cases were reported by Dr. Hector C. Cameron before the Clinical Society of London. The antiseptic method was employed in each case, and complete occlusion of the vessel was obtained without any constitutional or local disturbance, without any rise of temperature (excepting one case of diffuse aneurism), and without the formation of a single drop of pus.

A portion of the ligatures were prepared by the new and some by the old method of Professor Lister.

In commenting upon this instructive series of cases, Professor Lister said that "Dr. Cameron's experience coincided with his own in so far as it showed that the old-fashioned catgut answered quite well when well prepared and used strictly antiseptically. Except near any large branch, long duration of the catgut is probably needless."

EXTIRPATION OF THE KIDNEY.[4]

"It has been the custom to make the incision at the linea alba in cases where there is evidence of dislocation of the kidney, or where there is a renal tumor of considerable size, reserving the lumbar operation for cases in which the kidney is about normal in size and situation."

In discussing the merits of the two incisions, Braun finds upon examination of sixty-three nephrectomies, that the lumbar incision was employed in thirty-five cases with only eleven deaths, while incision through the linea alba was followed by death in eighteen cases out of twenty-eight.

---

[1] Edinburgh Medical Journal, May, 1882.

[2] Proc. Soc. de Chirurgie. Gazette Hebdom. de Méd. et de Chir. May, 1882.

[3] Lancet, May 6, 1882.

[4] Deutsche Med. Woch., 1881, Nos. 31, 32, 33; London Medical Record, March, 1882.

The comparative advantages of the two operations are thus dwelt upon by Mr. J. Knowsley Thornton in a clinical lecture upon nephrotomy and nephrectomy, suggested by two cases lying in his wards at the Samaritan Free Hospital.[1]

"Lumbar section is much in favor with some surgeons, and as it is the most suitable operation for the class of cases first named in my list of pathological conditions (calculus in the kidney or ureter) we will take it first.

"I have performed this operation three times, and all the patients have recovered. The first was a case of tubercular suppuration, and the patient derived immense relief from the operation; but a permanent fistula remained, and the other kidney becoming also affected, she eventually died of suppression of urine.

"The second was a case of one of the rarer forms of cystic disease in connection with the kidney; the cyst was opened and drained antiseptically, and the patient is now in good health. The third is the case of the young woman upon whom I afterwards performed nephrectomy, and who has just gone home quite well. . . .

"I wish then to direct your attention to the facts that the kidney is readily reached in this situation, but that there is small hæmorrhage which may be of moment in a very weak patient; and that the space for examination of the kidney is not very large. The organ is reached at the farthest point from the vessels, and it is impossible to thoroughly explore the whole course of the ureter.

"The question in my case was: Is the suppuration due to calculus or tubercle? The answer was not given by the exploration I was able to make through the loin incision; there might have been a stone in the ureter beyond my reach. There were no tubercular growths as in my first case. Had I made my exploration through the abdomen I should have been able, before cutting into the kidney, to satisfy myself whether the obstruction was in the ureter, and in this particular case should have recognized the enormously and irregularly enlarged and hardened ureter as an indication of tubercle, and should have at once proceeded to remove the kidney; as it was, I could not feel certain as to the cause of the suppuration, and determined to try the effect of free antiseptic drainage. The result was a partial improvement followed by relapse, and a month later I had to perform nephrectomy complicated by the presence of a putrid sinus in the loin. . . .

"In my second case it would have been absolutely impossible to complete the operation through the lumbar incision. . . .

"The only cases in the future in which I would use the lumbar incision are those in which there is little or no enlargement of the kidney, and strong evidence of stone. In short, I would restrict its use to the operation of nephro-lithotomy. The experiences of Bech, Butlin, Morris, Haward, and others abundantly prove that there is a great future for this operation, and that when the kidney substance which is cut through in reaching the stone is fairly healthy, there is nothing to fear from the immediate hæmorrhage, and but small risk of permanent urinary fistula. The abdominal methods would be quite unsuitable for this procedure, but experience alone can decide which method will be best when there is strong evidence of calculous pyelitis." . . .

Finally, "I should be disposed, in any case in which I had commenced by the lumbar incision, and then found it necessary to complete the nephrectomy, to do so by Langenbuch's incision, utilizing a portion of the already made lumbar incision for drainage, and closing the remainder. I would in all other cases, such as neoplasm of kidney, hydronephrosis, pyonephrosis, and floating kidney, operate by abdominal section, making the incision along the outer border of the rectus abdominis instead of in the median line."

RUPTURE OF THE URETHRA.[2]

Mr. Joseph Bell, of the Royal Infirmary, classifies the different varieties of this lesion as follows: —

First. Rupture behind a stricture of old standing, with a bladder contracted as to its lumen, and hypertrophied as to its muscular coat, acting with force on a urethra dilated behind a nearly impermeable stricture, and probably with coats thinned, sodden, possibly even ulcerated, from contact with putrid alkaline urine.

. These cases, being ruptured in the act of attempted micturition, are at once followed by urinary extravasation; destruction to the cellular tissue from the irritating nature of the urine are apt to be followed by rapid gangrene of scrotum and penis, extremely severe constitutional symptoms, and death unless speedily treated by free incisions.

Second. Rupture may occur in a perfectly healthy individual from an injury to the perinæum (a direct blow) unattended by fracture of pelvis or any other complication. Such accidents are heralded by hæmorrhage from the urethra, which is actually cut through. . . . Extravasation of urine and blood may occur, which free central incisions will relieve. The case will generally recover with a urethra permanently damaged, and certain to be affected by a most severe and intractable form of stricture of the membranous portion, which, though limited in its length, is very tight, and sure to recur again and again. Of these I have nothing new to say, but only to state that experience has taught me to avoid cutting and splitting, or any other fresh traumatisms, and to trust implicitly to patient, gradual, and constant dilatation.

Third. This one is that so well known in mining or quarry districts, in which a fall of stone or coal on the pelvis, or a heavy wagon going over the patient, has resulted in one or other of the following conditions, which I have frequently seen and dissected: either (*a*) a multiple fracture of the pelvis, generally of the rami of pubis and ischium; or (*b*) a fracture of pubis with partial separation of sacro-iliac synchondrosis; or (*c*) one or more fractures in vicinity of hip-joint, with separation of pubic symphysis. All varieties are very apt to be followed by a rupture of urethra in some place, as in No. 2, but having the far graver complication, that is, that it is caused by and in immediate relation to a fracture of pelvis and a consequent laceration of pelvic fascia.

In the last group of cases incisions will relieve tension, and let the blood and urine drain out, but it will be within the experience of every surgeon here that such cases with all your care prove very serious, and too often die.

---

[1] London Medical Times and Gazette, May, 1882.

[2] Edinburgh Medical Journal, December, 1881.

Mr. Bell advises the following treatment in such cases: "Never to allow a single drop of water to pass the sphincter vesicæ into the injured urethra for at least ten days." "If this can be managed then there is no fear of putrescence of the blood clot around the fractured pelvis; it remains a simple fracture, the lacerated urethra is given physiological rest, no incision need be made into its wall, and hence less risk of subsequent stricture will ensue."

Do not attempt to pass the catheter, but tap the bladder above the pubes by the fine needle of the aspirator, and repeat the operation every eight or twelve hours, according to circumstances, for at least ten days. If this is not practicable tap the bladder by the rectum, and retain a Coch's canula, "anything better than to let any urine into and out of the injured urethra."

AMPUTATION AT THE HIP-JOINT.[1]

Dr. R. Maclaren has performed three operations within a short time, in two of which he employed the Davy's lever to compress the common iliac artery through the rectum. In both instances it was easily introduced and applied, and "answered admirably" in controlling the bleeding. The operations were performed for disease, and the method employed was that advocated by Mr. Farneaux Jordan reversed. "First a circular incision was made at the upper third of the thigh, the tissues being divided down to the bone by two circular sweeps of the knife. Another incision was then made from this along the femur up to a little above the great trochanter, the tissues were separated from the femur, and the disarticulation effected. Recovery took place in two of the cases."

Hospital Practice and Clinical Memoranda.

GLAUCOMA.

ITS DIAGNOSIS WITHOUT THE OPHTHALMOSCOPE; THE MECHANICAL THEORY OF ITS ÆTIOLOGY; WITH A FEW CLINICAL CASES.

BY EDWARD S. PECK, A. M., M. D.,

Visiting Surgeon to the Ophthalmic Division of Charity Hospital, New York.

CASE I. A lady in Northern Vermont, sixty-three years of age, consulted me July 4, 1878, on account of deficient vision. Examination of each eye gave the following results: —

Right eye: vitreous a little cloudy; fundus easily detailed by the ophthalmoscope; retinal vessels small; lamina cribrosa cupped, grayish, and apparent, indicating a thinned sclera at this point; hyperopia $+\frac{1}{8}$, with which number of a spherical lens patient read at fifteen feet type suited to the normal eye at twenty feet ($V=\frac{15}{20}$).

Diagnosis: Incipient glaucomatous atrophy.

Left eye: media hazy; disc cannot be seen in detail; eye hard, and in first degree of tension (T_1); pericorneal zone injected; cornea anæsthetic, and feebly responsive to the touch of a piece of paper; pupil larger than the right, and less readily responsive to light. Vision so reduced in this eye that fingers are accurately counted at six inches (normal eye counts fingers at two hundred feet; vision in this eye is then $\frac{1}{400}$).

Diagnosis: Subacute, supervening upon chronic, glaucoma. Iridectomy was advised for the left eye and refused.

A solution of eserine, four grains to the ounce, was instilled into each eye from two to four times a day for several months. In February, 1879, eight months later, her physician, Dr. Butler, wrote that in the left eye the bulbar and superciliary pain and pericorneal vascularization had increased; pupil was larger and more hazy; the eyeball hard and prominent. February 15th. I went to her home, and found the representations not only correct, but intensified since the date of the letter. The left eye had a central staphyloma of the cornea, at whose greatest prominence was a perforating ulcer. Lens cataractous, as often occurs in acute, following chronic, glaucoma. Blindness total. Tension of highest grade (T_3): bulbar pain, especially in *upper* ciliary region, severe. Patient had had almost sleepless nights lately. Patient submitted to our decision as to enucleation, and with the assistance of Drs. Butler and Ferrin was put under ether, and the left eye removed. At this time vision of the right eye had diminished from $\frac{15}{20}$ to $\frac{12}{20}$, the former representing the fraction of vision eight months before. Here an insidious, painless process of chronic glaucoma was going on. In November, 1879, or nine months later, I learned that vision was still further diminished; iridectomy should have been made upon this eye without longer delay. At present date, Dr. Butler writes that the patient can count fingers only at fourteen feet ($V=\frac{14}{200}$) and that eserine was used but a few days.

Remarks. — How much value eserine was in each of these eyes it is difficult to estimate. I am inclined to think that for the right eye, or the one in chronic glaucoma, the process was stayed in some measure for the time, though we are at the disadvantage of not knowing how fast vision in the left eye had decreased before it was found to be almost gone, namely, $\frac{1}{400}$; and so cannot compare the two eyes of the same person; for the left eye it is quite apparent that eserine did not prevent an acute attack following a long invasion of chronic glaucoma.

CASE II. A young gentleman from Boston, thirty-six years of age, consulted me in New York in May, 1878, for obscure vision. He used his eyes largely in colors, and had noticed a failure in distinct vision for four to five years. He had never had photopsies, such as are made by floating bodies in the vitreous; nor chromopsies (iridescences), as jaundiced patients sometimes have. His detection of colors was accurate, the amblyopia not involving color-blindness.

Results of examination were as follows: Right eye, finger counting at thirteen feet, $V=\frac{13}{200}$; eye hard $=T_1$; with the left eye, patient read with difficulty at eighteen feet type suited to the normal eye at seventy feet, $V=\frac{18}{70}$; slight increase of tension of the globe $=T$. No hyperopia was found, and with neither eye was there improvement with any glass. With the ophthalmoscope there was seen a deep excavation of the optic nerve, a wide mounting of the vessels over the brim of the cup towards the nasal side chiefly, and large retinal veins, especially marked in the right, or less useful, eye.

Diagnosis: Chronic glaucoma, of hereditary origin, for which a four-grain solution of eserine was ordered. In the same month of May I had made an iridectomy on both eyes of this gentleman's mother, the glaucoma having existed several years. One operation doubled the quantitative vision (which still remains), while the other eye was less fortunate. A second examination of the son's eyes was made in December of the same year with the following result: Right eye counted fingers at sixteen feet; tension reduced to T; left eye reads type at eighteen feet suited to the normal eye at twenty-five feet; V=$\frac{18}{25}$. In other words, vision in the right was slightly improved, while that in the left eye was almost trebled.

---

[1] Edinburgh Medical Journal, December, 1881.

Examinations in January and March of the next year, the latter at twilight of a dark morning, gave the same fractions of vision: it is to be noted, that the patient abandoned the instillation for nearly three weeks, having broken the bottle, and lost the prescription. Patient was not again seen until July 19, 1880, when he consulted me in Burlington, Vermont. Vision of the right eye was finger-counting at twelve feet; =$\frac{12}{200}$; of the left eye $\frac{18}{40}$. Eserine had been used irregularly, and at long intervals. It will be observed that this patient, during an inspection covering two years and two months, had lost $\frac{1}{200}$ per cent. of vision in the right eye; while that of the left had doubled; namely, May 28, 1878, V=$\frac{18}{70}$; July 19, 1880, V=$\frac{18}{40}$. This is of exceeding interest in view of the fact that sight in the left eye began to fail four years before his first visit, from $\frac{1}{1}$, or $\frac{18}{18}$ to $\frac{18}{70}$, a loss of twenty-five per cent. Observations with eserine in chronic glaucoma are rare, and all well-authenticated cases are entitled to thoughtful consideration. Clinical experience is not sufficient to lead to the belief that eserine will supplant iridectomy in chronic glaucoma. This operation was proposed upon the right eye at the last date, but patient has declined it.

CASE III. Notes condensed from the hospital protocol. An Irishman, of fifty-five years, was admitted to the Ophthalmic Division of Charity Hospital, February 13, 1880, with an acute attack of glaucoma in the left eye, due to exposure. Previous history was that of a hard drinker, with repeated delirium tremens. Early in 1878 the left eye became inflamed, while he was on a spree; though he is positive it never received a blow or injury. He first presented himself at the eye service of the Northwestern Dispensary in August, 1879, with a severe catarrhal conjunctivitis; a dislocation of the lens downwards behind the iris, lens in the condition of hard, mature cataract; iris tremulous in every part of its equator; tension of globe normal; vision equal to finger-counting at one foot. There was no story of bulbar pain. Patient states that he had had gonorrhœa several times, but never a sore, and gave no history of syphilis. After a partially successful treatment of the conjunctivitis patient left the service, and returned early in February, 1880, with the following group of alarming symptoms: Left eye intensely bloodshot and very hard (T_2); cataractous lens inflamed, and lying in anterior chamber; bulbar pain severe; blindness total; cornea wholly devoid of sensation, and pupil in complete dilatation; bowels constipated, and appetite gone. Patient had been on a continuous debauch for two weeks.

Diagnosis: Glaucoma acutum; right eye normal. Removal of the globe was indicated and advised, on account of the length of time this acute condition had existed (presumably two weeks), its association with a luxated cataract, and the previous intemperate history of the patient. The consultant advised removal of the lens alone as a means of lessening tension and pain, which was done February 14th, without iridectomy, under narcosis. During extraction, the lens receded into its previous position of luxation behind and below the iris, and was removed with a Critchett spoon without the loss of vitreous. Tension was released, and everything went on well until the third day after the operation, when the patient became delirious, and tore the bandage from his eyes. During his violence, a severe intra-ocular hæmorrhage occurred, accompanied by the protusion of a mass through the corneal flap. This was cut off, and on examination in the fresh state was found to consist of the granular elements, rods, and cones of the retina, and blood. The violence of the patient increased, so that it became necessary to resort to a camisole. He was carefully watched on account of an attempt to jump out of the window; and refused all food. On the fifth day, after a good night's sleep, he woke up in his right mind. In a few days the eye, in a condition of collapse, and from which a thin, abundant, dark fluid was oozing, was removed, the patient being again put under ether. Patient recovered without any untoward symptoms, and was discharged at his own request in due time.

The suggestions to be made on this very severe case are obvious. First, the acute (fulminating?) attack of glaucoma, precipitated by a prolonged debauch, and favored by a fat, dislocated cataract, might have been treated with some, probably a large, success, if extraction of the lens and instillations of eserine could have been practiced immediately upon its occurrence. When the patient was seen after two weeks of such debauch, with total blindness and almost stony hardness, it was hardly a question as to removal of the globe, though extraction of the lens was practiced first, upon competent consultation, as a less severe procedure.

CASE IV. A lady, seventy years of age, whom I saw in Northern Vermont, in the summer of 1880. The right eye had been totally blind for four years from chronic glaucoma. In addition there were a hard cataract and a dense leucoma of the cornea, the latter for two years, due to intraocular pressure. The left eye had vision equal to $\frac{2}{200}$, with a very narrow central limitation of the field. In neither eye had there been severe pain. Instillations of eserine and tonics were ordered, as the patient was in a feeble condition. It was proposed to make an iridectomy on the left eye in the fall, but the operation was abandoned by dint of the distance of the patient, and severe family sickness. I learned by letter that vision gradually diminished until, in June, 1881, this eye also became totally blind.

CASE V. A woman of fifty-five years of age came to the ophthalmic service of the Northwestern Dispensary early in April of this year, with chronic glaucoma of the right eye, in which she alleged blindness for one month. There was every symptom of the disease except extreme tension and complete dilatation of the pupil, which are concurrent with chronic glaucoma. Patient could not detect the strongest reflex thrown into this eye, and the opinion was expressed that consecutive atrophy of the optic nerve had already set in. She consented to an iridectomy with its meagre hope of improvement. Operaiton was made April 25th, at Charity Hospital, with a large coloboma, and the bandage removed on the 28th, with the slightest trace of conjunctival irritation. Vision has so far improved that projection of light is perfect in every direction except to the nasal side, and fingers are counted at the distance of one foot.

The left eye had, at first, vision, $\frac{20}{40}$; its ophthalmoscopic appearances were those of a recent glaucomatous cupping of the optic nerve; eserine was ordered with improvement of sight, and the patient is now under careful observation. A later examination, with the pupil in marked myosis under eserine (pin-hole pupil), and with a $+\frac{1}{20}$ lens, gives a vision of $\frac{20}{20}$.

The objects of this paper are to emphasize the salient points in the diagnosis of glaucoma without the ophthalmoscope; to introduce a few cases to prove that eserine has not yet supplanted iridectomy in chronic, whatever it may do in acute, glaucoma; and to call attention to the mechanical theory of the ætiology of the disease. One of the earliest symptoms of chronic glaucoma is smoky vision; with progressive decrease of sight the patient detects concentric circles of light on looking at a luminous body; peripheral vision fails, especially on the nasal side of the eye, which is easily detected by having the eye fixed directly forward upon an object at the distance of about two feet, and requesting the patient to note when the fingers can first be seen approaching from different peripheral directions (or the same may be done by tracings with chalk upon a blackboard, blue paper, etc.); the cornea becomes anæsthetic, detected by touching its centre with a wisp of tissue paper; pupil enlarged to different degrees of mydriasis, and sluggish in response to a strong light; pupillary reflex green, simulating a recent, diffuse cataract; usually a small amount of pericorneal injection; always increased tension of the eyeball, determined by palpating with the forefingers each bulb in succession.

Chronic glaucoma is universally regarded as the typical form of the disease, yet those who argue the "inflammatory" theory of glaucoma assert the absence of every inflammatory symptom in this variety. Schmidt, in his exhaustive article on this subject in Graefe and Sæmisch's Encyclopædia, succinctly states that "*simple glaucoma* is the *type* of the whole group of glaucomatous diseases," while there is not a single factor of inflammation in its course.

It is not essential to this paper to enumerate the ophthalmoscopic appearances of the background of the eye; they are well known to every one familiar with the instrument.

Glaucoma forms about one per cent. of all diseases of the eye. In the acute or subacute forms it does not occur before the fiftieth year of life. [Case II., thirty-six years of age, had chronic glaucoma of hereditary origin.] It stands in co-relation with fatty degenerations and calcareous formations. It occurs principally in hyperopic persons (fifty to seventy-five per cent. of all glaucomatous patients being hyperopic); it may be produced by sudden bursts of passion, and the inhibition of strong emotions, which, in an eye *flat* either by nature or by atheromatous changes in the sclera, prevents the physiological escape of the filtered fluids of the eye at the corneo-iritic angle; it does not produce hyperopia, but, on the contrary, makes an eye more spherical, and its accommodative power is progressively destroyed.

With regard to the "mechanical" theory of glaucoma, Wecker claims to have been one of the first to define it as "*the expression of a disturbance of equilibrium between secretion and excretion with increase in the contents of the eye, and increased tension.*" Donders taught that "the excess of tension in glaucoma is the result of hypersecretion." Max Knies, of Zurich, in a long article, translated by the author of this paper,[1] stated that the pathological factors of glaucoma are to be found in the induration of the structures in the vicinity of the canal of Schlemm at the corneo-iritic angle. Weber, of Darmstadt ["with a head full of bright ideas," as Horner once said of him to me], in a later article, wherein his colleagues in the same line of study are treated with mere mention, regards the ætiology of glaucoma as purely mechanical, and as depending upon obstruction in the channels of filtration of the eye. What Weber calls *filtration* Wecker styles *secretion*. There are two channels of filtration of the eye: (1) the pericorneal region, and (2) the neighborhood of the optic nerve, the larger conduit being in the parts about the cornea. The anatomy of these regions is here referred to for the convenience of those interested.[2] Any obstruction at the iritic angle, formed by the lymph spaces of the cornea and the sclerotic, on the one hand, and the trabecular tissue of the periphery of the iris on the other, checks excretion of the eye by way of Fontana's spaces and Schlemm's canal into the subconjunctival space.

The true genesis of the disease may be sought for among the following conditions: a perforating ulcer of the cornea with incarceration of the iris; serous iritis; a dense pannus; posterior total (annular) synechia; injury to the lens, subluxations, with peripheral swelling up of its fibres, giving rise to irritable glaucoma; discission of secondary cataract; sarcoma of the choroid, gumma of the iris, foreign body in the ciliary region; *strong solutions of atropine;* in fact, any force tending to press the iris against the iritic angle. The ætiology from this stand-point is purely mechanical, and does not belong to the obscure domain of the neuroses of secretion; hence the treatment must be mechanical, and its chief reliance is upon iridectomy. As is well known, this was Graefe's accidental discovery while attending the clinique of the elder Desmarres. Eserine is believed to be a useful adjunct, while atropine, on the other hand, should be avoided.

Reports of Societies.

EIGHTH ANNUAL MEETING OF THE AMERICAN NEUROLOGICAL ASSOCIATION.[3]

HELD AT THE HALL OF THE ACADEMY OF MEDICINE, NEW YORK, JUNE 21, 22, AND 23.

SPECIAL REPORT FOR THE JOURNAL.

SECOND DAY, THURSDAY, JUNE 22.

ON this day there was but one session, in the afternoon. DR. CHARLES K. MILLS, of Philadelphia, read a paper entitled,

NOTES ON TWELVE CASES OF BRAIN TUMOR, CHIEFLY WITH REFERENCE TO DIAGNOSIS.

Some of these cases had been published, but the prominent points in them were repeated in order that intelligent conclusions might be arrived at from a study of the whole number. The first was a male, thirty-five years of age, who had had syphilis, and in whose case there was the history of a fall in which the head was violently struck. The chief symptoms were headache, vomiting, vertigo, tonic spasms of the muscles of the wrist and fore-arm, and gradually increasing blindness. The electro contractility of the muscles was retained, and there was no true paralysis. Ophthalmoscopic examination showed the existence of choked disk. The head temperature was above the normal. The autopsy revealed the presence of a fibroma in the right frontal lobe. The second case was quite similar in character, there being a history of syphilis, and the patient suffering from headache and vertigo, although there was no vomiting, as in the other. There was also general hyperæsthesia. No ophthalmoscopic examination was made. At the autopsy it was found that there were three gummata in the brain, the chief of these being an inch and a quarter in diameter, adherent to the pia mater, and involving parts of the first and second frontal convolutions. The second gumma was located at the second retro-frontal fissure, and the third at the posterior extremity of the fissure of Sylvius. The third case was syphilitic also. There were vomiting and constant headache, which increased in severity until it became exceedingly intense. There was left hemiplegia, and the hearing and sense of smell were affected. The surface temperature of the head was increased, and this was more marked on the right than on the left side. At the autopsy it was found that there was a gumma situated at the optic chiasm, and the microscope showed that there was descending neuritis of the optic nerve instead of the well-marked choked disk of the first case. The fourth patient was a female of thirty, in whom there was no history of constitutional trouble. She was highly emotional, and the headache, which was continuous, was sometimes agonizing. There was left hemiplegia and some muscular spasm, most marked in the left arm. At the autopsy there was found a carcinoma adherent to the pia mater of the convexity of the left hemisphere at the ascending parietal convolution. In the fifth and sixth cases the lesions (in one instance a gumma and in the other tubercular) were cortical, and in the motor zone. In the latter it was situated on the right hemisphere, and in the interior of the hemisphere there was found a cavity of considerable size. In this case there was increased head temperature and hemi-anæsthesia. In the seventh case, which was characterized by attacks of mania at intervals and complete blindness, there was a firm tumor, two and a half inches in diameter, located in an occipital and postero-parietal position on the left side, and adherent to the pia mater and dura mater, which were united. In this case there was choked disk and optic atrophy. In the eighth case, in which the patient was syphilitic, there was considerable stupor of mind, and shortly before death one general convulsion. A gumma was found involving the first and second temporal convolutions, and also pachymeningitis of the opposite hemisphere. The ninth patient was a girl of thirteen, with a tubercular history, and she suffered principally from paroxysmal headache, vertigo, and attacks of reeling and falling. At one time the ophthalmoscopic examination showed choked disk, and later, optic atrophy. After death a tubercular tumor was found occupying two thirds of the right cerebellar hemisphere, and also internal hydrocephalus. In the tenth case the patient, who was a female patient, aged twenty-seven, suffered from intense paroxysmal headache and very frequent vomiting. For four weeks before her death she had almost constant vomiting, and Dr. Mills said it was the most persistent case of vomiting that he had ever met with. She also had marked vertigo and partial hemiplegia and hemi-anæsthesia. A gumma was found at the autopsy, which involved the right cerebellar hemisphere. In the eleventh patient, who had had syphilis, there was descending optic neuritis. Among the other characteristics of the case were defective memory and persistent epistaxis. A gumma, half an inch in diameter, was found in the body of the pons. The twelfth patient, in addition to headache, of great severity at times, vomiting, and vertigo, suffered from failure of memory, depression of spirits, and epileptiform seizures, and he finally died after a series of convulsions. At the autopsy a gumma, a quarter of an inch in diameter, was found on the anterior surface of the pons. In this case there was descending neuritis.

---

[1] Arch. of Ophthalmology and Otology, 1879, vol. vii., pp. 347 et. seq.

[2] Waldeyer's plates in Wecker's Ocular Therapeutics, pages 262 and 263, 1879. Wood & Co., New York.

Schmidt's article on Glaucoma in Graefe and Sæmisch's Encyclopædia, vol. v., chap. 1.

Max Knies, on the Nutrition of the Eye, and the Avenues of Exit of the Intraocular Humors, Arch. of Ophthalmology and Otology, loc. cit.

[3] Concluded from page 568.

In reviewing these twelve cases, Dr. Mills remarked that there was headache in all of them. In ten out of the twelve the headache was felt all the time, but with paroxysms of great intensity. In two it was most intense in the part of the head nearest to the seat of the tumor. In four cases percussion of the head was resorted to, and in three of these it elicited intensified pain near the seat of the lesion, which seemed a point of considerable importance. There was vomiting in eight of the twelve cases, and vertigo in ten. In the two cases of cerebellar tumor the vertigo was of a very striking character. The intellectual faculties were affected to some extent in all, but he did not think it was possible to learn much in regard to the special seat of these from a study of tumors of the brain. There was greater or less anæsthesia in seven of the twelve cases. Choked disk was found in five cases, and descending neuritis in three. The temperature of the head was not taken in all of the cases, but in five of them it was found to be higher than normal. The conclusion reached by Dr. Mills from the observations made was, that in tumors of the brain the head temperature is elevated, and the increase of temperature is greatest in the vicinity of the growth present. From a study of these and other cases he believed that the diagnosis of tumor of the brain could be made with greater certainty than that of any other intra-cephalic disease, the diagnosis being based mainly on the peculiar headache, the vomiting, the vertigo, the choked disk or optic neuritis, and the increased head temperature. As to the local diagnosis, when the growth was in certain positions its seat could usually be determined by special manifestations, and when in others the diagnosis could be arrived at by a process of exclusion. Tumors of the middle portion and base of brain could be detected with comparative ease, and when they occupied the motor zone an early and exact diagnosis could be made. There was little difficulty in making out a tumor of the pons if it was of large size, and cerebellar growths could also be detected with considerable certainty. As before intimated, the peculiar vertigo that accompanied cerebellar tumors was a sign of much value. Finally, percussion seemed to be of considerable service in determining the seat of brain tumors.

Dr. Putnam believed that there was only one form of choked disk, and thought that he expressed the opinion of the best ophthalmologists when he said that choked disk was always a sign of neuritis.

Dr. Rockwell related the case of a lady, twenty-five years of age, who, for ten or twelve years, had had hysterical attacks, and, later, was subject to epileptiform seizures. Her temper was irritable, and she had suffered from the beginning from headache, which finally became excruciating. The persistent headache and the epileptiform attacks seemed to be very significant of tumor of the brain, yet after death nothing of the kind could be found, the only pathological changes present being those indicative of chronic meningitis. It was a well-known fact that brain tumors might exist for a long time without giving rise to any very positive signs of their presence, and hence he thought this case was instructive, as the symptoms apparently indicating such a growth were very striking. There was no possibility of any syphilitic taint in this patient.

Dr. Seguin said that he had been very much instructed by Dr. Mills' paper, and he was glad to find that his cases afforded confirmatory evidence of the correctness of the views now held by the best authorities in regard to localization. He agreed with the writer that headache was ordinarily one of the important symptoms in tumor of the brain; but at the same time, in two cases of well-defined central sarcoma of the brain which had come under his observation, and reports of which he had already published, this sign was lacking. In the first case there was hemi-epilepsy, and afterwards hemiplegia, but absolutely no headache until after the occurrence of an attack of apoplexy, quite late in the course of the disease, and this could not, of course, be attributed to the sarcoma. In the second case there was likewise no headache. Before the symptoms of tumor became very definite it was true that there was some occipital neuralgia, but this disappeared in a few weeks.

In regard to choked disk his experience had been very singular. In only two of all his cases of tumor of the brain had this sign been present. Dr. Seguin then described nine or ten cases which he had met with, and exhibited a series of diagrams representing the seat and character of the lesion in each. He said he did not do this with any idea of depreciating the value of choked disk as one of the signs of brain-tumor; but only for the purpose of pointing out the error of rejecting the diagnosis of such a growth simply because the optic nerves were not choked, a mistake into which he himself had been led on one occasion some time since. As far as he was able to judge, choked disk was more apt to be associated with basal or cerebellar tumors than with those situated in other locations. He would like to inquire of Dr. Mills whether any of his patients exhibited an undue susceptibility to the action of chloral. In several of his own cases the drug produced such an amount of intoxication, and otherwise disagreed so much with the patients, that he was obliged to give it up and resort to the use of morphia instead.

Dr. Amidóu gave some details of the history and autopsy of Dr. Seguin's second case of sarcoma of the brain, which had been more particularly under his own care. There were no choked disk and no headache; but there was gradually increasing hemi-paresis, which before death became complete.

Dr. Mills, in concluding the discussion, said that he thought his cases were decisive as to the distinction between choked disk and descending neuritis. His own view was that it depended on the position and character of the growth present whether we would have choked disk or neuritis descending from the lesion. Practically he believed Dr. Putnam's views the same so far as the results were concerned. In the initial stages there was no inflammatory action. He could not account for the fact that choked disk was so often absent in Dr. Seguin's cases; but it certainly seemed very remarkable to him. In regard to the presence or absence of headache and vomiting, it seemed to him that a generalization would cover the exceptions. In his experience tumors of the brain, in nine cases out of ten, originated in the meninges; the pia mater and dura mater generally being fused together. In some cases, however, the tumor was not connected with the membranes. In these the ordinary symptoms of tumors of the brain might not be met with if they were situated in such a way as not to cause pressure, and if the brain tissue were gradually displaced with the advancing growth of the tumor. Headache he believed to be distinctly a symptom of irritation of the meninges, and its occasional absence might thus be accounted for by the fact that no such irritation was caused by the growth present. With regard to the action of chloral in this class of cases he had no opinion to express, as he had used it to a very small extent. He had generally been accustomed to relieve suffering in his patients with morphia, and he had always found it to act in a very satisfactory manner.

Dr. A. D. Rockwell, of New York, then read a paper entitled

A CASE OF POST-PARALYTIC CHOREA, WITH REMARKS ON THE TREATMENT OF CHOREAIC SYMPTOMS IN GENERAL.

The patient was a child eight years of age. A year previous to the time that the case came under his care (in February, 1881,) the boy had an attack of acute articular rheumatism, and this was followed by paralysis of the right leg and arm, and decided choreaic symptoms in addition. When he examined his heart he found a functional (systolic) murmur; but this was exceedingly irregular, and often altogether absent. The measures which he adopted for the treatment of the case were three in number, namely: the application of the ether spray to the spine, the internal administration of fluid extract of conium, and the use of central galvanization; and the patient was discharged entirely cured at the end of ten weeks. In regard to the ether spray, he did not believe its therapuetical value was very great. In the cases in which he had employed it, in connection with other agents, he had not found that recovery was any more rapid than in those cases where the same agents were used without the spray. At the same time, he thought it well to resort to it, as it could easily be applied by the parents of choreaic children, and it had, at all events, an excellent moral effect. As to the conium, he had a better opinion of its utility, as it had seemed to have an evident beneficial effect in a number of cases in which he had employed it exclusively. In the case in question he had commenced with five drops of the fluid extract three times a day, and had gradually increased the dose up to twenty-five drops. As to the efficacy of electricity in chorea, he could only express the same favorable opinion that he had been led to form a number of years ago. He was aware that this was not acknowledged by a great many in the profession, and he quoted the views of a number of standard authorities on diseases of the nervous system in opposition to its use; but he believed that the reason why better results had not been obtained with it was either because an incomplete method was employed, or its use was not kept up long enough. In chorea, as in a number of other affections, success with electricity was largely a matter of detail. In employing central galvanization in chorea it was his practice to wet the hair thoroughly, and then covering the head with a sponge cup electrode, make use of a current of great power.

Dr. Morton remarked that in the treatment of chorea various remedies had from time to time come into fashion and been greatly lauded by different authorities. It had come to be pretty well understood, however, that the affection would get well under almost any severe kind of treatment; though it would not, as a rule, get well without treatment. Dr. Rockwell's experience with conium was doubtless the same as it would have been in case he had used any one of several remedies in large enough doses. In chorea it seemed to be necessary to take the disease by storm, as it were, and almost any kind of treatment that made a strong impression upon the system would be efficient. One of the most successful methods was the use of a direct jet of cold water.

Dr. Edes thought it was of no use to give conium unless this was done in sufficient doses to produce the physiological effects of the drug. He did not believe this agent compared in value, however, with arsenic, as given in the ordinary routine treatment of chorea.

Dr. Seguin said he quite agreed with Dr. Edes in regard to the necessity for large doses of conium. It was his common practice to give a teaspoonful of the fluid extract of the drug; and he always employed Squibbs' preparation. It was true that it was often advisable to commence with small doses; but he had never seen any effect, even in children, with less than fifteen minims. With respect to the treatment of chorea in general, he confessed that he was enough of an old fogy to be very well satisfied with the results obtained from the use of arsenic.

The president, **Dr. Hammond**, stated that he quite agreed with what Dr. Edes and Dr. Seguin had said in regard to the use of conium.

Dr. Rockwell explained that though he had commenced with five drops of the fluid extract of conium, he had increased the dose to twenty-five drops, which he thought was sufficiently large for a child of that age.

Dr. Morton seemed to think that it was necessary to surprise the system in some way in order to cure chorea; but he thought that such surprises were quite as likely to increase the severity of the symptoms as to remove them.

The last paper of this session was one by **Dr. Graeme M. Hammond** on

A CASE OF ATHETOSIS RELIEVED BY NERVE STRETCHING.

Nerve stretching, he said, in introducing the subject, was, as a rule, very unsatisfactory in cases where there was any organic lesion, and athetosis came under this class. Before the present instance the operation had been only once performed in athetosis, and that was by Dr. William J. Morton, in the department for nervous diseases at the Metropolitan Throat Hospital, New York. Dr. Hammond having distributed a report of this case, reprinted from the *Journal of Nervous and Mental Disease* for January, 1882, remarked that he thought that if less force had been employed the paralysis of the hand would not have resulted. The patient in whom he resorted to nerve-stretching was Ross, his father's original case of athetosis, and he quoted a brief outline of its history from Dr. Hammond's work on Diseases of the Nervous System. Up to the time of the operation, he said, the movements continued uninterruptedly day and night, and thus interfered with sleep and impaired the general health of the patient. He was also subject to epileptiform attacks, six or seven of which occurred during each week. The operation was performed five weeks before, in May, 1882. The median nerve was cut down upon below the elbow, and gentle traction was made upon it both in an upward and downward direction. It was found to be very elastic, but was not stretched more than half an inch. No stretching of the ulnar nerve was undertaken, as he wished to observe first the effect produced by that of the median. As soon as the patient recovered from the anæsthetic he could keep his fingers still, and from that time on had steadily improved. The epilepsy had also greatly improved, as there had been only two attacks since the operation, and they were of a much less severe character than those before it. The result in this case was certainly remarkable, as the researches in all the cases of athetosis yet recorded indicated that the disease was dependent upon degenerative changes in the corpus striatum. How, then, was the effect of the nerve-stretching to be explained? There were only two ways in which it could act. One was to render the nerve incapable of transmitting the athetosis influence from the brain centre, and the other to make such an impression on the brain centre as to cause it to cease giving rise to such influences. The latter explanation he thought the more probable, since the movements in the leg had also ceased, and since the epileptic attacks had been so greatly modified in addition. The patient was now exhibited, and it was found that he could hold his hand perfectly quiet, although if his attention was not directed to the matter there were occasionally some slight movements in the fingers, which seemed to be due more to the force of habit than anything else. He said that after the operation was the first time for twenty years that he had been able to keep his hand still.

Dr. Morton thought that at the end of a year the man upon whom he had operated would probably have a quieter hand than Dr. Hammond's patient, because he had used greater force in the stretching; and he believed that in proportion as motor power was restored the athetosis would return. This, however, would be an interesting point to observe in the future.

Dr. William A. Hammond also made a few remarks on the case.

In the evening Dr. Hammond invited the Association, with a large number of the medical profession of the city, to one of those delightful entertainments for which his hospitable mansion, on Fifty-Fourth Street, has become so justly famous.

THIRD DAY, FRIDAY, JUNE 23.

On this day there were again two sessions. Dr. Roberts Bartholow, of Philadelphia, was to have read in the afternoon a paper on the Effects of Remedies on the Spinal Cord, but on account of his absence it was read only by title. The first paper read was by **Dr. V. P. Gibney**, of New York, and was entitled A Case of Swift and one of Slow Compression of the Upper Cervical Cord from Displaced Odontoid Process, with Specimens. He was followed by **Dr. William A. Hammond**, who read a paper on

THE DISEASE OF THE SCYTHIANS, MORBUS FEMINARUM, AND ANALOGOUS CONDITIONS.

Among the ancient Scythians there were a number of men, as described by Hippocrates, who were afflicted with impotence, and who were accustomed to dress and act precisely like women. The impotence was believed by them to be a direct visitation of the gods, but Hippocrates ascribed it partly to the fact that the Scythians were so constantly on horseback and partly to the fact that they wore breeches. Among the modern descendants of the ancient Scythians in the Caucasus, according to the accounts of various travelers, these creatures were still to be found, and all observers agreed that impotence was very prevalent in these wild tribes. This was no doubt attributable to their almost constant life in the saddle, and to the fact that they were greatly addicted to the practice of masturbation; a habit in which they had great temptation to indulge on account of their being unaccompanied with women on the many long excursions which they were accustomed to make. Dr. Hammond's attention was first directed to this subject thirty years ago, when he was in the United States Army Medical Service in New Mexico, where he found among the Pueblo Indians a special class of individuals who, in connection with certain superstitious rites, had been reduced to a state of impotency, and had acquired many of the characteristics of females, whose dress and habits they assumed. In two of them whom he had the opportunity of examining he found the penis and testes exceedingly small, of the latter there being apparently nothing left but fibrous tissue. Impotence he found was also very prevalent among these Indians, and was to be attributed, he thought, to the same causes as among the tribes of the Caucasus. Those whom he found dressed and acting as women he believed to be subjects of morbid impulse rather than of insane delusions. The paper was discussed by **Drs. M. A. Pallen** and **E. C. Spitzka**.

HÆMORRHAGE INTO THE PONS.

Dr. F. T. Miles, of Baltimore, next presented a morbid specimen showing hæmorrhage into the pons. The case was a remarkable one, he said, as the patient had lived for eleven months after the attack, while usually the hæmorrhage in this position was so large that death followed very shortly. At the autopsy there was found to be no disease proper of the brain; the only abnormal conditions present being the hæmorrhagic spot in the pons and a certain cloudiness of the meninges, such as was frequently seen in the brains of those who had led intemperate lives. The remarkable feature of the case seemed to be that the abducens had escaped entirely. Paralysis of motion was confined entirely to one branch of the fifth pair, and was accompanied by the early destruction of the eye.

Dr. C. L. Dana, of New York, then read a paper on

THE EFFECT OF NERVE-STRETCHING UPON THE SPINAL CORD.

In the outset, he said that the idea that we could move the cord and not the surrounding membranes was erroneous. From his own experiments, as well as those of other observers, he had arrived at the conclusion that it was possible to stretch the spinal cord from one fifteenth to one twelfth of its length, or, in the human subject, about one inch. He quoted various authorities, and said that Julius Browne, who had made by far the most careful experiments yet recorded, had determined that the cord, when put upon the stretch moved different amounts at different heights. Thus, while it moved one tenth of an inch in the lumbar region it moved only one seventieth in the upper part of the dorsal. Dr. Dana then gave a detailed account of a large number of experiments which he had himself made upon animals and upon the cadaver. Some of the conclusions at which he arrived were the following: Clear evidence of the stretching of the cord by means of the sciatic nerves was confined to instances of the cutting operation. In subcutaneous stretching of the sciatics the evidence that any central effect was produced was extremely slight. In the case of an epileptic whose sciatic nerves were stretched under ether there was constant tinnitus and dizziness for two weeks after the operation. Nerve-stretching, while it might be a powerful means of moving the cord in the cadaver, was probably not so in life. Experiments showed, however, that a force of about one hundred and fifty pounds was sufficient to pull out the sciatic nerves by the roots. Finally, he explained that he had confined himself to a study of the gross effects. The paper was discussed by **Drs. Morton** and **Hammond**.

Dr. R. T. Edes, of Boston, read a report of some cases illustrating concussion of the spine, in connection with which he called special attention to the subject of tendon reflex of the upper extremities. **Dr. Seguin** presented, for Dr. J. J. Mason, some beautiful photographs of microscopic sections representing portions of the central nervous system of batrachians and reptiles.

At the evening session there was a demonstration of a machine for statical electricity, with new electrodes, by Dr. William J. Morton, and the following papers were read: A Case of Tumor of the Fourth Ventricle of the Brain, with Specimen, by Dr. H. D. Schmidt, of New Orleans, and A Case of Vertebral Cancer and Paraplegia, by Dr. E. C. Seguin, of New York.

The following officers were elected for the ensuing year: President, Dr. Robert T. Edes, of Boston; Vice-President, Dr. William J. Morton, of New York; Secretary and Treasurer, Dr. E. C. Seguin, of New York; Councilors, Drs. F. T. Miles, of Baltimore, and J. C. Shaw, of Brooklyn.

◆

THE AMERICAN MEDICAL ASSOCIATION.

Section on Dentistry.

Chairman, Dr. D. H. Goodwillie, of New York.
Secretary, Dr. Truman G. Brophy, of Chicago.

FIRST DAY.

Dr. William D. Kempton, of Cincinnati, presented a paper on

ORAL HYGIENE.

He entered into a careful analysis of the teeth, giving their elements and functions, and the acid theory of decay with the factor that modifies the action of acids, namely, vitality. Then followed an enumeration of the evils resulting from diseased teeth, showing that the whole system was more or less affected, many cases of headache, earache, affections of the eye and stomach, being traceable to badly decayed teeth.

The doctor closed his paper with directions for preventing decay in teeth, prefacing with the remark that those teeth in which decay had already set in should be either extracted or filled. Physicians should feel it their duty to point out to their patients the results of neglect of the teeth, and no medical school should consider its curriculum complete unless some attention is paid to the teeth.

PHOSPHATES IN FOOD.

During the discussion which followed, the subject of phosphates in food was introduced. The enamel of the teeth is composed mainly of phosphate of lime, and Dr. Allport was very earnest when he made the remark that our food should be taken as nearly as possible in the condition in which God prepared it. He referred especially to wheat, asserting that the so-called patent process of making flour removed much of the phosphate in the wheat, the result being that not enough was left to keep the teeth strong and healthy.

Dr. Lawrence antagonized the stress placed upon this subject, alleging that other elements were as necessary as phosphates.

SECOND DAY.

HEREDITY IN DENTAL DEVELOPMENT.

Dr. W. C. Barrett, of New York, narrated a case which he illustrated by plaster casts, showing the effect of heredity in dental development.

Dr. J. S. Marshall, of Syracuse, N. Y., then read a paper on

THE NEED OF DENTAL AND ORAL SURGEONS IN THE ARMY AND NAVY.

This subject has often been brought to the attention of the profession, but never formally till August, 1861, at the American Dental Convention in New Haven, where it was referred to a committee of five, who, after consultation with Surgeon-General Hammond, made a report favoring the appointment of dental surgeons in the army and navy. In 1868 Senator Hamlin introduced a bill before Congress providing for the appointment of such surgeons in the army and navy, but it failed to become a law. The second attempt was made during the Forty-second Congress by Representative Townsend, who merely advocated the appointment of such surgeons to the military and naval academies; the only result of this was the appointment of a dental surgeon at the naval academy at Annapolis, with the rank of assistant surgeon. Dr. Marshall then stated the necessity for such appointments.

The soldier is provided for in all cases except where his teeth are concerned. Soldiers on the frontier and sailors on a long cruise have no opportunity of receiving dental services, no matter how much they may need such attention, and the disease must run its course, being turned over to the bungling of the hospital steward or some less competent person. The treatment of fractures or gun-shot injuries of the lower jaw is the same as twenty-five or thirty years ago, being much behind the times. The interdental splint, invented by Dr. J. B. Bean, of Georgia, during the civil war, and improved by Dr. Norman Kingsley, of New York, is a very great improvement in the treatment of these cases, and is indorsed by the best surgeons the world over.

The appointment of dental surgeons in the army and navy is objected to because the amount of oral diseases is too small to require specially educated surgeons to treat them. Dr. Marshall then gave some statistics showing the relative number of men in the army and navy who, in the years 1878 and 1879, were reported as having needed dental services, and the opinions of the surgeons-general of the army and navy, General Hancock, and Admiral Porter, relative to the appointment of such surgeons. To petition Congress for action is useless without the heads of medical departments see the need and make the recommendation. The paper closed with a recommendation that a committee be appointed by this Section to arrange a blank statistical report covering all the dental and oral diseases, and request the surgeons-general of the army and navy to incorporate them in the regular medical and surgical reports.

A discussion followed the paper, which resulted in the offering of a resolution by Dr. Allport that a committee of three be appointed by the Section, who, in connection with Dr. Maynard, of Washington City, and the Surgeons-General of the army and navy, should make what efforts they deemed advisable regarding the appointment of dental and oral surgeons in the army and navy, and report to the Association next year. Drs. Allport, Marshall, and Williams were appointed such committee.

FOOD IN ITS RELATION TO THE DEVELOPMENT OF TISSUES.

Dr. Lawrence, of New York City, presented a resolution calling for the appointment of a committee to consider the subject of food, mastication, insalivation, digestion, and assimilation, in its relation to the development of the different tissues and organs of the body.

THIRD DAY.

By action of the Association the name by which the Section is known was changed to the Section of Dental and Oral Surgery, and as such it will hereafter be known.

The president appointed the committee called for in the resolution of Dr. Lawrence, of New York, presented and adopted the day before. The committee are Drs. Lawrence, Talbot, and Kempton.

Dr. Goodwillie narrated three cases of

NECROSIS FROM ARSENIC,

and illustrated them with wax models.

Case I. showed, by two models, necrosis of lower jaw from each ramus forward. The case, before and after, with a new deposit of bone without any deformity. Photograph of the patient also shown.

Case II. Two models showing a case of poison by arsenic and necrosis of right superior maxillary.

(*a.*) Showing case one week after removal of necrosed bone, without in the least disturbing the soft tissue, also showing the formation of new bone.

(*b.*) The new bone complete, and the mouth perfect, and no external deformity.

Case III. Upper maxillary showing abscesses formed at nearly all the teeth, the result of applying arsenic to destroy sensibility of the dentine before filling the teeth.

The above served to show the sad results of the improper use of this powerful agent in devitalizing dental pulps.

Dr. Eugene S. Talbot, of Chicago, then read a paper on

THE INJURIOUS EFFECTS OF MERCURY AS USED IN DENTISTRY.

The subject as treated was specially confined to the use of amalgam fillings in natural teeth. Said the speaker: —

"There can no longer be doubt that amalgam fillings in teeth will sooner or later produce mercurial poisoning. The dire effects of this metal are not always seen immediately after the fillings are inserted, years sometimes elapsing before the injurious effects are felt and noticed."

The history of two well-marked cases was given by Dr. Talbot. The amalgam fillings were removed, and gutta percha temporarily substituted, these in turn being replaced with gold, after which all symptoms of mercurial poisoning disappeared. A detailed account of a series of experiments made by him were then presented, the conclusions and results being as follows: —

First. Mercurial vapor is given off from amalgam fillings at all ages and from all varieties, even from fillings sixteen years old, the vaporization being sufficient in quantity to respond to chemical tests.

Second. Minute doses of mercury, if taken internally three times a day, are capable of producing decided effects.

Third. Mercury when inhaled into the lungs is far more active than when taken into the stomach.

Fourth. If small doses taken into the stomach occasionally are capable of producing marked effects, and the vapor is much more active than the solid preparations of the metal, is it not a necessary consequence that amalgam fillings which are constantly giving off mercurial fumes to be inhaled into lungs, not a few times daily, but always, without cessasion, day or night, — is it not a necessary consequence that in many sensitive persons such fillings must produce deleterious effects?

Fifth. When tons of this material are consumed annually, is it not credible that many constitutions are affected?

Sixth. Physicians in treating dyspeptics, anæmics, and persons suffering from nervous debility would do well to examine the mouths of patients and know if artificial teeth on red rubber or fillings of natural teeth have in their composition mercury or any of its compounds.

EDUCATION OF DENTISTS.

"The subject How Dentists should be Educated was admirably presented by Dr. W. W. Allport, of Chicago, in an article of considerable length. The introduction was a review of dental surgery in the past, it, with all other branches of medicine, having emanated from a common centre, and the possibility was that in the future these diverse systems would more and more tend to consolidation. Then touching upon the very core of his theme, Dr. Allport said: —

"The dental surgeon must be educated both in mechanical dentistry and oral surgery, for no disease can be intelligently treated without a knowledge of the histology, anatomy, and the physiology of the organ or organs diseased, as well as the pathology, prognosis, and rationale of the treatment employed to restore the parts to a healthy condition; and this, whether applied to any single organ or any number of organs of the body, or to the entire system, is medical science. The successful dental surgeon must have a thorough medical education in all its branches, supplemented by special instruction in dental surgery. Over forty years ago Drs. Harris, Hayden, and others sought to establish a department for teaching dental surgery in the medical department of the University of Maryland, but their application was refused. Dr. Harris, however, succeeded in organizing what was known as the Baltimore College of Dental Surgery, and the graduates of this institution were given the degree of D. D. S. — doctor of dental surgery. In addition to this, several medical colleges have been induced to establish dental schools in connection with their medical departments, but as yet none of these institutions have required a full medical education of their dental graduates.

"All dental surgeons should receive a medical education and become legitimate specialists in its practice, and all medical graduates should be as fully educated in diseases of the teeth and their treatment as they are in other diseases."

A paper on Medico-Dental Science was read by Dr. J. B. Lawrence, of New York City. Following are the main points touched upon by the speaker: —

All organized efforts for the dissemination of dental knowledge and the advancement of dental interests have been made since the year 1840. It was estimated then that there were 1200 dentists in the United States; their practice was in a primitive state, and all instruments, appliances, and apparatus were guarded with more or less secrecy, lest one dentist should profit at the expense of the experience of another. Much was done to modify this feeling between 1840 and 1860. Now there are 25,000 persons in the United States engaged in the practice of dentistry. But many of them have but a limited knowledge of the human body because their education is limited. They changed from some other occupation to this suddenly, and settled down to the practice of the profession, because it paid them better than anything else they could do. These are the so-called dentists of the rural districts, and they have a counterpart in a certain class of dentists in the cities who have a few books, a fair supply of instruments, and a big microscope, which is more an expensive toy than an actual aid to them. They undeniably know something of dentistry, but have little or no knowledge of any other organ of the human body. Such men evidently can do but little to benefit a patient aside from the mechanical work demanded in the removal of aching members. The truth is the dentist should have a general knowledge of all branches of materia medica, and special education in anatomy, physiology, and chemistry, as well as in his special field of dental and oral surgery.

With the reading of this paper the Section adjourned *sine die*.

Section of Ophthalmology, Otology, and Laryngology.

In the absence of the chairman, Dr. B. St. John Roosa, of New York, Dr. Cohen, of Philadelphia, called the meeting to order, and Prof. S. B. Jones, of Chicago, was elected chairman. Dr. Carl Seiler, of Philadelphia, acted as secretary. An interesting paper was read by Dr. W. Porter, of St. Louis, on

RECURRENT PHARYNGEAL HÆMORRHAGES.

Discussion followed, and the paper was referred to the Committee on Publication. After some informal discussion Dr. X. C. Scott, of Cleveland, O., reported cases of

DIPHTHERITIC CONJUNCTIVITIS TREATED WITH IODOFORM.

He had applied the powder to the surface once a day, and the result had been very satisfactory.

In the discussion which followed **DR. JOHNSON**, of Peoria, said that he was in the habit of applying the vapor of iodoform dissolved in ether to the affected mucous membrane.

DR. COHEN said he had used solutions of iodoform in chloroform or ether in the form of a spray, and also dissolved in collodion, as an external application in recent goitre with great benefit.

DR. CARPENTER, of Pottsville, Pa., said: I have been observing the treatment of exophthalmic goitre by internal administration of iodoform for nine or ten years, and in every case that has come under my notice with highly gratifying results. It has not seemed necessary in this variety of goitre to make an external application of the drug. It has been sufficient to administer a pill containing two or three grains of iodoform, three times a day, until marked relief is obtained. If necessary, the dose may be increased. A good form of the pill is the sugar or gelatine coated, and it may be combined with iron. By this means alone I have cured several cases of exophthalmic goitre, no matter how grave they might be, when uncomplicated by other disease.

Having communicated this treatment to Prof. William Pepper, of the University of Pennsylvania, and to Dr. J. Solis Cohen, of Philadelphia, I am gratified to know that it has in their hands been found successful.

The action of this drug I believe to be sedative and tonic upon the sympathetic nervous system, and to act chiefly in that way in the process of curing exophthalmic goitre.

The constitutional effects of the iodine do not seem to me to be the efficient agent in bringing about the happy result.

DR. GLASGOW said he had treated cases of old goitre and also of other glandular tumors of the neck by the external application of iodoform, with excellent results.

DR. THOURON asked whether the drug acted through the nervous system; if so, the external application must act upon the peripheral nerves.

DR. COHEN thought it acted as an anæsthetic upon the mucous membrane when locally applied. Internally it acted as Dr. Carpenter had stated; but he would like to ask whether it was safe to administer iodoform internally to a pregnant woman.

DR. CARPENTER stated that he had given the drug to a pregnant woman with the same results as in other cases.

DR. SEILER then stated that he, having seen a notice in one of the journals of a method discovered by Professor Rossbach for anæsthetizing the larynx, had tried the ether spray on each side of the neck until a portion of skin the size of a silver dollar had been frozen, and had found that the larynx, which previously had been absolutely intolerant to the introduction of an instrument, had become quite insensible to the presence of the forceps.

DR. COHEN stated that two of his assistants had tried the experiment, but had failed to obtain satisfactory results.

SECOND DAY.

A letter from Dr. B. Joy Jeffries of Boston, was read, in which he asked the coöperation of the Section in bringing about legislation in the matter of color-blindness.

GALVANO-CAUSTIC INSTRUMENTS.

The author of the paper on the programme not being present, **DR. CARL SEILER**, of Philadelphia, exhibited some galvano-caustic instruments for operations in the larynx, pharynx, and nasal cavities. He said that the insulating material, usually silk, protecting the conducting wires, was very apt to be burned off by the heat developed in the wires. He had substituted vulcanized fibre for the silk, and had found it to answer the purpose admirably. In order to be able to bend the instrument to any desired curve the insulating material was made in sections small enough to allow the wires to be bent in any shape desired.

ACCIDENTAL VACCINATION OF THE EYE.

DR. CALHOUN, of Atlanta, reported a case of Accidental Vaccination of the Eye, occurring in a little boy seven years of age, who, having some virus on his fingers from a pustule on the arm of his little sister, scratched himself on various portions of the body and on the left eye, inoculating himself. The pustule on the eye developed upon the edge of the lower lid, involved the conjunctiva, and ran its regular course, destroying the cornea, either by pressure, or by the ulcerative process induced by the virus. The other eye also became inoculated but did not develop a pustule.

TUMOR OF THE BASE OF THE SKULL.

DR. CONNOR, of Detroit, reported a case of Tumor of the Base of the Skull. The symptoms first noticed by the patient were increasing deafness in the right ear until complete insensibility to sound was reached, then the eye on the same side began to show signs of insensibility to light, also progressive, until sight was entirely lost. There were no other symptoms except a general wasting of the body. After death a large tumor was found occupying the base of the skull, which was firm and hard, with a nodular surface. This tumor by pressure had absorbed the portion of brain matter in immediate contact with it as far up as the optic thalamus, which was destroyed. Dr. Connor believed the tumor to be a chondroma, but had not had an opportunity to make a microscopical examination.

NEURITIS, RETINITIS, AND CONJUNCTIVITIS.

DR. AGNEW, of New York, then made some remarks on Optic Neuritis and Retinitis, giving the histories of a number of cases.

He also called attention to the matter of communicable diseases of the eye in schools, and cited, as an illustration, the case of a school near New York, in which, on account of insufficient washing accommodation, insufficient food, and poor sanitary regulations, over three hundred children had been attacked by catarrhal conjunctivitis. The eyes of several of the children had been destroyed.

DR. JOHNSON, of Chicago, then related a case of Paralysis of the Abductor Muscles of the Larynx following Diphtheria, and after the healing of the tracheotomy wound, and said that he had never heard of a similar case.

DR. YOUNG, of Iowa, then made a motion to make the matter of communicable diseases of the eye the subject for discussion at the next session of the Section.

THIRD DAY.

DR. TURNBULL, of Philadelphia, presented a paper On the Hearing in Children, which was read by title and referred to the Publication Committee.

FIBROID POLYPUS OF NOSE.

Dr. Seiler made a verbal communication relating a case of Large Fibroid Polypus of the Nose in a girl sixteen years of age. The tumor had been partially removed a year previous, but had reappeared. When he saw the case the left nostril was entirely filled with the polypoid mass, and the rhinoscope revealed a large nodulated tumor, appearing to the eye and touch like an enchondroma, in the post nasal cavity. The tumor was removed through the post nasal opening, by the Jarvis' snare, and proved to be a fibroma containing cartilaginous nodules. It had grown from the upper portion of the vomer by a slender pedicle.

COMMUNICABLE EYE DISEASE.

Dr. H. G. Young then opened the discussion on communicable eye disease, calling attention to the difference of opinion held by authors as regards treatment, and to the necessity of proper sanitary measures to prevent the spreading of such diseases in crowded schools and tenement houses. He approved of sulphate of copper when properly and systematically applied.

Dr. Smyth, of Michigan, advocated the hot-water treatment, for an hour, twice a day.

Dr. Johnson, of Peoria, spoke of the treatment of acute conjunctivitis, recommending the mildest applications, such as boracic acid, six to ten grains to one fluid ounce, to which he is in the habit of adding two drops of tincture of iodine. In his opinion purulent ophthalmias are, as a rule, treated too heroically, and he recommended mild measures in this affection also. Then he uses the solid nitrate of silver.

Dr. Connor, of Detroit, thought the general public should be better enlightened as to the dangers resulting from neglect of acute eye diseases.

Recent Literature.

The Incidental Effects of Drugs. A Pharmacological and Clinical Hand-Book. By **Dr. L. Lewin**, Assistant at the Pharmacological Institute at the University of Berlin. Translated by **W. T. Alexander**, M. D. New York: Wm. Wood & Co. 1882. 239 pages.

The subject is a very practical one, and the work is the best and almost the only one of its kind; it is the result of a collection of many facts on this subject, which are widely scattered through medical literature, and to which the author has added from his own experience. The arrangement of the material is based on a therapeutic classification. The work is an indication of the increasing interest which is being taken in the effects and action of remedies, and will be of service in reminding physicians that some of the drugs given are not of unmixed benefit; moreover, we cannot too carefully watch for any deleterious action which is not the less readily noticed if it is known what symptoms are likely to accompany it.

What is said about some of the drugs in common use is open to criticism, but the author has done well under difficulties.

The reader should bear in mind that the phenomena spoken of are, as a rule, very exceptional, else he may be frightened instead of warned.

The translation has been well made. The print is large and clear, and on good paper.

Medical and Surgical Journal.

THURSDAY, JULY 6, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE ELASTIC BANDAGE IN THE CURE OF EXTERNAL ANEURISM.

It is hardly more than a century since ago the old operation of incision or excision of the sac with ligature of the artery at either end — the old operation as it is now called — and amputation were the received procedures for aneurism of the extremities. Hunter substituted the less formidable ligature, the old operation being reserved for peculiar and exceptional cases. Later years exhibit a tendency to still further simplify the treatment by substituting compression in various forms, limiting the ligature somewhat as it limited the old operation of opening the sac; though pressure for the cure of aneurism is probably as old as surgery itself, confined, however, in earliest times to direct pressure upon the tumor itself. The attention of surgeons is specially drawn to the application to aneurism of that form of compression attributed to Esmarch by a pamphlet On the Rapid Method of Cure of External Aneurism by means of the Elastic Bandage, by A. Pearce Gould, F. R. C. S., of London, a second and greatly enlarged edition of a paper read by Mr. Gould at the London International Congress. This is but one of the fruits of the last Congress, which was particularly rich in papers worthy of thought and comment. To the discussion of the subject at the Congress we owe this enlargement of the original paper. In its present form it is a plea for the elastic bandage, but a singularly candid one, which asks for it rather fair consideration than blind adoption, and discusses the subject in a manner which brings out its faults and its advantages. Were all subjects presented to the profession in a like spirit we should see fewer fashions in surgery. The paper is based upon a collection of seventy-two cases of external aneurism treated by elastic compression, which comprises all the cases found by the author in our current literature. Of these cases eight only are American, and are confined to New York or its vicinity. It is scarcely credible that so small a number should include all the cases treated by this method in America. The slight attention paid to the matter on this side of the Atlantic would be sufficient excuse, if excuse were needed, for devoting a little space to the discussion of Mr. Gould's pamphlet. Deductions drawn from statistics are of course only relatively accurate. If the statistics are false the deductions necessarily lose their value. The author takes pains to emphasize the fact that a sufficient number of cases may have remained unreported to change materially his figures could they be ascertained.

In considering any mode of cure of aneurism the distinction between fibrin and blood clot must be kept in view. They differ in composition and appearance not more than in the circumstances under which they are formed. Mr. Gould formulates the distinction thus: "Laminated fibrin is only separated from blood in motion; when once formed it is very stable, not prone to disintegration or to organization. Blood clot is only formed when the blood is at absolute or partial rest, and when formed the clot is unstable, readily being organized, disintegrated, absorbed, or converted into a dry, friable material." The means ordinarily employed in the treatment of aneurism aim chiefly at what might be called the natural method of cure by a gradual deposit of laminated fibrin from a greatly diminished, not a wholly occluded, stream. This takes place in most cases of mechanical and digital compression and ligature. The main artery occluded at one point allows a lessened stream to flow through the collateral branches.

Compare a case treated by elastic compression. The elastic bandage is applied firmly up to the tumor, then intermitted or applied lightly over the aneurism, then applied firmly above it, and, lastly, the elastic tube or tourniquet may be tightly applied, if necessary, to stop all pulsation. After an hour or more this apparatus is removed, and the tumor is found consolidated; a quantity of blood shut up in the aneurismal sac has formed a blood clot; slight compression is maintained for a series of hours to protect the newly formed clot. The absolute stasis of the blood in the aneurism, allowing the blood to consolidate *en masse*, is the distinguishing trait of this method.

The author considers in an interesting manner the question why the blood coagulates in the aneurism, and shows that the clotting probably commences in the interior of the aneurism, where the conditions are materially changed from those of the interior of an ordinary blood-vessel, and proceeds to the blood in the afferent and efferent artery; on the formation and subsequent organization of the clot in the artery depends the cure of the aneurism.

Of the tabulated cases about fifty-three per cent. have been cured. With the undoubted truth that many unsuccessful cases have not been reported, the reasons of failure are to be especially looked to. Want of success may be attributed in all cases, according to Mr. Gould, to failure of one or other of the two essential processes: (1) either the blood does not coagulate, or (2) the coagulum does not organize and permanently occlude the aneurism.

The blood fails to coagulate either because it is not left stagnant at all or not for sufficient time, or because of some peculiarity in its composition or in its relation to the sac; or, having coagulated, it may not organize and permanently occlude the sac, because, improperly protected, it is washed away by the force of the current, or disease of the parts may be too far advanced to allow of such organization. To make another division equally favorable to discussion, the failure may be due to faulty performance on the part of the operator, or to inherent defects in the patient. The surgeon may fail to occlude the vessels, which would be hardly possible had he ever employed the elastic bandage for other purposes, or he may leave it applied for insufficient time. In one of the cases cited the bandage was applied for one hour without effect, four days later it was retained for two hours and a cure resulted. Many cases show a failure to realize on the part of the surgeon the essential element in this rapid method, applying it fifteen minutes at a time for several successive days. The protection of the clot after removal of the bandage is certainly rational, and its neglect accounts satisfactorily for certain failures to secure a permanent cure in several cases in which pulsation was absent when the compression was first removed.

Of the cases where some defect in the condition of the patient leads to failure there is little occasion to say anything in this place. Certainly it is fair to attribute to constitutional peculiarities a certain proportion of the unsuccessful attempts. Some of the reports show that treatment was given before the application of the bandage to increase the coagulability of the blood.

No surgical procedure is entirely devoid of danger. There are few which are not open to objections, and wherever there is a choice of methods the best is oftentimes simply that one which possesses the fewest disadvantages. It may be said in general that that procedure is safer which avoids any solution of continuity. Compression in its various forms has at least that advantage over the ligature, and is resorted to in some form in the treatment of external aneurism by most surgeons of wide experience. The dangers of and objections to this procedure enumerated by Mr. Gould are in part common to the use of the elastic bandage for any cause, in part limited to its use in aneurism, and some of them are common to all operations for that disease.

The alleged dangers and drawbacks are as follows: —

(1.) The increase of the general arterial tension caused by the application of the elastic bandage.

(2.) The fall of the general arterial tension on removing the bandage, owing to the paralytic dilatation of the vessels of the affected limb.

(3.) The risk of causing gangrene.

(4.) The danger of exciting renal disease.

(5.) The pain it produces.

(6.) The danger of injury to nerves by the prolonged compression to which they are exposed.

(7.) The danger of causing rupture of the aneurism.

(8.) Its frequent failure.

The first alleged danger is an objection to the use of the bandage in general — the blood pressed out of the bandaged limb is added to that in the general circulation, filling its vessels more completely and increasing the pressure on their walls. The weight of the objection is greatly increased in the case of a spontaneous aneurism which is the result of a diseased artery, a condition which often exists equally in other portions of the arterial system; in such a case to increase the blood pressure is to increase the danger at least of causing other aneurisms or to augment the danger of bursting their walls if they already exist. Mr. Gould, without undervaluing the charge, reminds us that other elements must combine with the increase of blood in the vessels to increase the pressure. Arteries possess a power of contraction and expansion which fit them to deal with altered amounts of blood, and certain sphygmographic tracings of his own indicate that increased tension is by no means an inevitable accompaniment of the use of the rubber bandage.

Certain it is, however, that in the presence of signs of other aneurisms the question of treatment of aneurisms of the extremities is much more serious, and such a possible result of compression should be kept in mind.

There would seem to be room for further study of arterial behavior during elastic compression of a limb, and also for comparison between the effects produced upon blood pressure by elastic compression of a limb and the ligature of its principal artery.

The reddening of the limb, and the abundant bleeding from small vessels, which follows the removal of the elastic bandage, is a matter of every-day observation. The fall of arterial tension and the consequent tendency to syncope, which accompanies this condition, may be occasionally a subject for concern; that it should be greater when the bandage has been applied for the cure of aneurism, than when it is applied for other reasons, is difficult to understand. Possibly the paralyzed condition of the smaller vessels assists in forming the collateral circulation. An essential part of the operation, as has been said and repeated, is the partial compression of the artery for some hours after the removal of the ligature. This would seem to be sufficient to obviate any effect upon the patient resembling that of a sudden hæmorrhage.

Of the danger of exciting renal disease we know very little indeed. This objection is a sort of corollary to the first. The charge was made by Mr. Bryant, who adduced three cases in support of his view. In one of them the bandage was applied twice, once thirty minutes, and subsequently eighty minutes, without result; in four days the artery was ligatured, and in a month albuminuria appeared, followed by death sixty-nine days after the operation. If the albuminuria was the result of the bandage it is a danger incurred every time it is applied. It is equally logical to say that the albuminuria was the result of the ligature. In a fatal case from cardiac failure, after a cure of an aneurism by the bandage, renal congestion was found; a combination that needs no unusual and extraordinary explanation, and in the third case albuminuria followed thirty-seven days after the use of the bandage. For the pain we have that direct gift of heaven, ether. The danger of causing injury to the nerves is confined almost wholly to the upper extremity, where aneurisms are comparatively rare.

The charge of causing gangrene is so serious that it seems worth while to look at it with some care. Mr. Gould has confined his attention exclusively to the individual cases, which were cited at the Congress as showing unfavorably for the treatment by elastic compression. It seems equally good to look at the subject in a little broader light. Gangrene is an accident that happens with every form of treatment, and the proportion of cases in which it occurred in this series is too small to sanction any very serious charge. The very nature of the disease is such that we should expect, *a priori*, that in a certain number of cases there would be a failure to establish collateral circulation sufficient to nourish the limb. In a series of fifty-five cases of popliteal aneurism comprised in Mr. Gould's table treated by the elastic bandage, gangrene of the leg occurred in two cases. In one case (Mr. Bryant's) the bandage failed to secure lasting consolidation, and the ligature was applied before the gangrene appeared. In the second case (Mr. Pemberton's) subsequent examination showed the femoral vein to be obliterated by the growth of the tumor. Such a result occasionally follows the ligature, and often followed the old operation, though in that operation the patency of the artery was destroyed at a lower point, and consequently a larger number of branches remained to establish collateral circulation than in the Hunterian operation. In fact, Mr. Pott used very emphatic language in speaking of the old operation, perhaps somewhat stronger than his contemporaries would have approved. His remarks have been often repeated. They are so apropos that it may be pardonable to quote them again. In his essay on certain diseases of the leg which require amputation, he says: —

"In both these aneurisms,[1] the femoral and the popliteal, it most frequently happens, that the artery is not only dilated and burst, but it is also distempered some way above the dilatation particularly in the popliteal. This may very probably be one reason why the ligature is in general so unsuccessful." (The context shows that he refers to the ligature above and below after opening the sac.) "The want of collateral branches of sufficient size to carry on the circulation is another very powerful impediment. Whether these may be allowed sufficient to frustrate the attempt by the operation, I will not take upon me to say; but certain I am that it does not succeed; I have tried it myself more than once or twice; I have seen it tried by others; but the event has always been fatal; excessive pain, a high degree of symptomatic fever, great tension of the whole limb, rapidly tending to gangrene and ending in mortification, both upwards and downwards, have destroyed all those whom I have seen on whom the operation of tying the artery has been practiced.

"Nor have I ever seen any other operation than that of amputation, which has preserved the life of the patient."

That Mr. Pott's strong language was not entirely uncalled for is well known to every student of surgery. In considering the subject we may go a step further back and say that an aneurism tends in itself to produce gangrene in the parts below it. Pott continues in his argument in favor of amputation, "if some relief be not obtained and that speedily from the art of surgery, gangrene and mortification are the inevitable consequences."

---

[1] The Chirurgical Works of Percival Pott, F. R. S., and Surgeon to St. Bartholomew's Hospital. A new edition with additions. In three volumes, London, 1783, vol. iii., p. 377.

In a table of aneurisms of the femoral artery treated by ligature, published by Norris in the *American Journal of the Medical Sciences*, there were fifty deaths in two hundred and four cases, and of these fifty fatal cases twenty-three are stated to have died of gangrene, a much larger proportion, it is to be hoped, than happens in later years.

In a table of cases of various arteries, treated by compression either mechanical or digital, in the *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques*, are fifty cases of popliteal aneurism. In this series gangrene occurred three times. In one case compression caused solidification, and gangrene, ultimately fatal, followed forty-eight hours later; in two cases, compression failed, the ligature was applied, and fatal gangrene resulted.

These figures are not sufficiently numerous to sanction any very definite conclusion: it would certainly be improper to draw the conclusion that elastic compression is the safer method from so small a number of cases, but they justify the negative inference that no smaller amount of gangrene could have been expected from any other mode of treatment.

In one case of Mr. Gould's series the sac ruptured, and the aneurism became diffuse, and in another the sac increased in size, and all the symptoms became aggravated while undergoing elastic compression. Such cases are rare, by no means unique. In 1858 Malgaigne described similar accidents occurring under treatment by pressure, and instances have been noted since. Space fails to enumerate them. They usually do well with the ligature.

That fifty per cent. of the cases are cured is not a bad showing when we consider that, as a rule, in the failures the success of the subsequent ligature is not endangered. Certainly it cannot be said of elastic compression as Holmes said, and Bryant quotes with approval, "that no case can be cured by the ligature in which mechanical pressure fails, and that it is applicable only in cases in which the more usual forms of practice are inapplicable or have failed."

Consideration has been principally confined to aneurisms of the popliteal; these cases are the most numerous and best fitted for comparison, and the most serious charges against the method of Reid (Staff Surgeon Walter Reid, R. N., first used Esmarch's bandage for this purpose) are based on cases that belong in this category. Attention has been paid rather to certain objections to the method than to the claims in its favor.

It is by no means the object of this notice to advocate the blind adoption of this method of treatment — personal experience could alone justify such an advocacy — but rather to draw attention to a method which certainly deserves further study, whatever the final judgment as to its actual value may be, and especially to show the duty of reporting cases, unsuccessful as well as successful, that such industrious students as Mr. Gould may have the proper materials at their disposal — the negative as well as the positive evidence — for the decision of such questions as are discussed in this interesting little pamphlet.

◆

IS THE PATHOLOGIST WORTHY OF ANY HIRE?

Some weeks since the Journal, in commenting editorially upon the work during the winter of the Clinical and Pathological Section of the Suffolk District Medical Society, took the occasion to regret the very modest proportion which the pathological element bore to the whole work evolved by that Society, and to comment on the striking fact that with all the training, both foreign and domestic, upon which the Boston medical world justly piques itself, neither Pathological Society, properly speaking, nor Pathological Transactions, nor genuine zeal and activity in the pursuit of pathological studies find a home here.

The material exists, and the proper training for its utilization and interpretation, as well as a due interest in the subject itself, are by no means wanting; and yet we find the, younger men, with time, with inclination, and with training for this department of medical investigation, devoting less and less time to it, and more and more to other things after the first few years of their career.

This cannot be merely because they arrive at a more realizing sense of the analogy between the organs taken from the cadaver and "the fire-works after our fourth of July," but rather, we are forced to believe, because the importance and necessity of keeping their own personal fire-works in an ante- rather than a post-fourth-of-July condition comes more and more home to them.

There are but three appointments in Boston carrying with them at once an opportunity for pathological research and any pecuniary recompense. Some thirty years ago funds were left to Harvard University by the late Dr. Shattuck to found a professorship in morbid anatomy or pathology; the University has given an assistant to the professor occupying this chair, and in addition has provided for a curator of the Warren Anatomical Museum. With these exceptions there are no salaried positions open to pathologists as such, and we are afraid that their aid in confirming or correcting the diagnoses in private practice is too often but poorly remunerated or passed to the credit of their good nature or devotion to abstract science. The pathologist, though dealing with the dead, must himself live and work hard; he may not himself say to his colleagues, "Live and let live," but they should remember that from one point of view this precept is applicable to their relations with him.

We should be happy to receive any suggestions for remedies for the present position of matters pathological. We are inclined to think ourselves that our large hospitals would not be wrong were they to conclude that the interests of their patients would be abundantly promoted by making the positions of the pathologists salaried ones.

THE EXECUTION OF GUITEAU AND SOCIETY'S PROFIT.

WE cannot let the execution of Guiteau, the assassin of President Garfield, pass without reiterating very briefly the opinions which the case called forth from the JOURNAL since it first came into notice a year ago. Before the law had reached its judgment, and now that its judgment has been put in execution, the matter was and is an eminently proper one for our consideration. In the intermediate stage we felt that the question had become a purely legal one.

We feel it our duty to reiterate the opinion expressed by us from the first, that Guiteau was an irresponsible lunatic, and should neither have been tried by an ordinary criminal process nor have been sentenced to death.

The only possible advantage to be derived by society from the trial and execution of this wretch is the deterrent influence it may exercise upon responsible criminals who allow themselves to commit crimes under the impression that a plea of insanity will avert punishment. On the other hand, the real lunatic of the Guiteau type cares nothing, as a rule, for the death penalty, but to him the notoriety this man has enjoyed for a year is very sweet.

Society *may* benefit by this miserable business should it lead to a revision of our present laws, so that similar cases may be quietly investigated by a lunacy commission, and, if found suitable, quietly relegated to a government criminal lunatic asylum, from which there should be no release save with the sanction of the committing commission.

If Guiteaus are to be deterred from gratifying their impulses it will be by the dread of a regular and secluded life carefully supervised and devoted to daily work, not by a few notorious moments on the scaffold.

MEDICAL NOTES.

NEW YORK.

— Among the appointments that have recently been announced in the corps of instructors in the medical department of the University of the City of New York are the following: William H. Thomson, M. D., professor of diseases of the nervous system (in addition to the professorship of materia medica and therapeutics); Lewis A. Stimson, M. D., professor of surgical pathology (instead of pathological anatomy); Stephen Smith, M. D., professor of clinical surgery (instead of orthopedic surgery); Herman Knapp, M. D., professor of ophthalmology; F. R. S. Drake, M. D., clinical lecturer on practice of medicine; N. M. Shaffer, M. D., clinical lecturer on orthopedic surgery; Joseph E. Winters, M. D., clinical lecturer on diseases of children (in addition to being demonstrator of anatomy); William C. Jarvis, M. D., clinical lecturer on laryngology; Lawrence Johnson, M. D., lecturer on medical botany.

— Loo Foo, a Chinaman, died recently at Bellevue Hospital from poisoning by opium, in which he is said to have indulged to excess as a solace for blighted affection; a young Irish woman with whom he had become enamored having persistently refused to become his wife.

— Mr. Ramscar, of the "Old Gentlemen's Non-Sectarian Home and Children's Asylum and Sanitarium," has been discharged without awaiting the action of the grand jury, it having been decided by the judge before whom the preliminary examination of the case came that there was not sufficient evidence to hold him upon. The children who had been inmates of the institution (most of whom, it is said, were found in a very wretched condition) have been removed and placed under the charge of the Society for the Prevention of Cruelty to Children.

— Charles R. Lantrying, the father of two children born prior to May 11, 1873, whose names had never been recorded at the Bureau of Vital Statistics, applied in 1881 to have their names registered there; but the application was refused because the Board of Health in 1873 adopted a regulation that no alteration whatever should be made of the records of births, marriages, or deaths which occurred before May 11, 1873. Judge Arnoux, of the Supreme Court, has now given the opinion that under the law of 1880 the board is bound to examine the parties upon application, and unless proof is offered to contradict the facts alleged in the petition and affidavit of the relator, it is bound to grant his petition and make the entries asked for.

— A Norwegian employed as night watchman by a firm of builders at Port Chester, Westchester County, was advised by a friend to try Jamaica rum for the relief of intermittent fever, from which he was a sufferer. Accordingly, the other night, when a chill came upon him, he purchased a quart of rum and drank the whole of it; but in a few hours he died, on account of the enormous dose of the remedy.

— At a recent meeting of the New York Academy of Medicine Dr. A. B. Judson read a paper entitled, Some Practical Inferences from the Pathology of Hip Diseases. Alfred Barron Garrod, M. D., F. R. C. P., F. R. S., and J. Crichton Browne, M. D., of London, were elected Corresponding Fellows.

Miscellany.

LARGE DOSE OF CHLORAL HYDRATE.

DR. MADIGAN, of Brooklyn, N. Y., relates, in the *Chicago Medical Review*, a wonderful recovery from an overdose of chloral. Through the influence of friendship, a physician, addicted to liquor and chloral both, obtained a situation as assistant physician in a prominent insane asylum of the East (name not given). During the absence of the other physicians a patient was seized with a violent attack of epileptic mania, when the doctor in question administered from a vial in his possession *one ounce* of chloral hydrate dissolved in water, the patient sinking into a deep slumber within five minutes. The attendant's suspicion being aroused, medical aid was summoned, who applied the stomach pump, rinsing the stomach out with clear water, and then treated the poisoned man with hypodermic injections of whiskey and strychnine. It was, however, obvious to all present that the greater portion of the narcotic had already been absorbed in the circulation. The highly interesting part of the story is, that after a relatively natural slumber, lasting forty-eight hours, the patient recovered. Other than the prolonged slumber, no untoward results occurred, and no extraordinary phenomena presented themselves until the third day, when a vivid scarlatina form of eruption, involving the entire body, made its appearance, which fully desquamated within two days after its appearance. The patient's convulsions were fewer in number after his recovery from this excessive dose, but the buccal mucous membrane was for a long time markedly tender.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 24, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	661	310	29.83	11.93	8.62	6.96	5.89
Philadelphia	846,984	305	107	15.09	6.23	—	6.23	—
Brooklyn	566,689	240	109	24.58	9.15	5.41	2.91	8.32
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	156	50	24.36	6.41	6.41	11.54	6.41
St. Louis	350,522	199	119	34.64	6.52	23.09	1.51	1.01
Baltimore	332,190	186	97	30.62	1.61	17.72	5.37	2.13
Cincinnati	255,708	134	72	28.24	4.89	4.89	1.09	4.34
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	91	51	29.55	10.98	21.96	1.11	1.11
Pittsburgh	156,381	58	30	27.58	5.17	13.69	1.72	1.72
Buffalo	155,137	60	26	23 33	6.66	—	4.99	1.66
Milwaukee	115,578	45	34	8.88	17.77	2.22	2.22	—
Providence	104,857	36	7	16.66	5.55	5.55	—	5.55
New Haven	62,882	28	8	7.14	3.57	—	3.57	—
Charleston	49,999	38	16	23.68	2.63	5.26	—	2.63
Nashville	43,461	21	6	23.80	9.52	19.04	—	—
Lowell	59,485	27	8	14.81	22.22	3.70	—	—
Worcester	58,295	17	5	29.40	—	11.76	—	—
Cambridge	52,740	17	3	11.76	—	—	—	5.88
Fall River	49,006	19	6	15.78	—	5.26	—	—
Lawrence	39,178	15	6	26.66	13.33	—	13.33	—
Lynn	38,284	15	—	26.66	13.33	6.66	6.66	—
Springfield	33,340	13	4	15.38	—	7.69	—	—
Salem	27,598	14	1	—	—	—	—	—
New Bedford	26,875	12	2	8.33	8.33	—	—	—
Somerville	24,985	10	4	10.00	10.00	—	—	—
Holyoke	21,851	7	1	14.28	—	—	—	—
Chelsea	21,785	5	4	—	—	—	—	—
Taunton	21,213	5	—	—	—	—	—	—
Gloucester	19,329	8	2	—	—	—	—	—
Haverhill	18,475	8	1	12.50	12.50	—	12.50	—
Newton	16,995	4	1	25.00	—	—	—	—
Brockton	13,608	9	5	77.77	—	11.11	66.66	—
Newburyport	13,537	3	1	—	—	—	—	—
Fitchburg	12,405	5	2	20.00	—	—	—	—
Malden	12,017	2	0	—	—	—	—	—
Nineteen Massachusetts towns	147,169	44	8	20.12	—	4.54	9.08	—

Deaths reported 2517 (no reports from Chicago and New Orleans): 1106 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 649, consumption 353, lung diseases 197, diarrhœal diseases 214, diphtheria and croup 125, scarlet fever 81, measles 48, typhoid fever 42, small-pox 42, whooping-cough 36, malarial fevers 21, cerebro-spinal meningitis 19, puerperal fever 11, erysipelas eight, typhus fever two. From *measles*, New York 17, Brooklyn nine, St. Louis seven, Baltimore and Buffalo four each, Cincinnati two, District of Columbia, Pittsburgh, Milwaukee, Lowell, and Lawrence one each. From *small-pox*, Cincinnati 29, New York, Philadelphia, and Baltimore four each, Nashville one. From *typhoid fever*, Philadelphia 20, New York, Boston, and St. Louis four each, Pittsburgh and Lowell two each, Brooklyn, Baltimore, Buffalo, Lawrence, New Bedford, and Quincy one each. From *whooping-cough*, New York 13, Charleston five, Brooklyn four, St. Louis and Pittsburgh three each, Philadelphia, Boston, Buffalo, Milwaukee, Providence, Springfield, Newton, and Chicopee one each. From *malarial fevers*, Brooklyn six, New York five, St. Louis and District of Columbia three each, Boston, Buffalo, Charleston, and Northampton one each. From *cerebro-spinal meningitis*, New York six, Buffalo and Worcester three each, Fall River two, Philadelphia, Boston, Baltimore, New Bedford, and Fitchburg one each. From *puerperal fever*, Boston, Cincinnati, and Lynn two each, New York, Buffalo, Providence, New Haven, and Holyoke one each. From *erysipelas*, New York four, Philadelphia, St. Louis, District of Columbia, and Cambridge one each. From *typhus fever* New York two.

One hundred cases of small-pox were reported in Cincinnati, Baltimore 15, Buffalo nine, Pittsburgh three, Brooklyn and Boston each one; diphtheria 39, scarlet fever 10, typhoid fever three, in Boston; scarlet fever eight, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,090,705 (population of the State 1,783,086), the total death-rate for the week was 12.17 against 16.65 and 17.84 for the previous two weeks.

For the week ending June 3d, in 173 German cities and towns, with an estimated population of 8,311,954, the death-rate was 27.5. Deaths reported 4401: under five 2257; pulmonary consumption 617, acute diseases of the respiratory organs 519, diphtheria and croup 149, scarlet fever 89, whooping-cough 52, measles and rötheln 51, typhoid fever 43, puerperal fever 26, small-pox (Beuthen three, Essen and Koblenz each two, Ratisbon and Munich each one) nine, typhus fever (Danzig two) two. The death-rates ranged from 15.1 in Mannheim to 16.3 in Augsburg; Königsberg 31.9; Breslau 34.7; Munich 35.5; Dresden 25.9; Berlin 29.8; Leipzig 21.0; Hamburg 26.1; Cologne 31.2; Frankford a. M. 22.3; Metz 31.2.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending June 10th, the death-rate was 19.7. Deaths reported 3204: acute diseases of the respiratory organs (London) 221, whooping-cough 151, measles 148, scarlet fever 61, diarrhœa 70, fever 52, diphtheria 28, small-pox (London 10) 17. The death-rates ranged from 13.5 in Norwich to 28.8 in Manchester; Plymouth 16.1; Bristol 17.9; London 18.6; Leeds 18.7; Birkenhead 19.9; Bradford 21.4; Liverpool 19.9; Portsmouth 25.3. In Edinburgh 21.1; Glasgow 24.3; Dublin 25.0.

For the week ending June 3d, in the Swiss towns, population 494,390, there were 41 deaths from consumption, diarrhœal diseases 19, acute diseases of the respiratory organs 17, scarlet fever four, diphtheria and croup four, whooping-cough three, typhoid fever three, erysipelas and measles each one. The death-rates were, at Geneva 16.5; Zurich 10.1; Basle 17.9; Berne 25.3.

The meteorological record for the week ending June 24th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1882.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 18	29.729	60	64	58	96	93	96	95	SE	NE	NE	1	8	1	G	G	R	—	—
Mon., 19	29.711	69	87	57	100	51	90	80	E	S	S	4	22	3	G	F	O	—	—
Tues., 20	29.922	64	72	57	67	37	67	57	W	NW	Calm	20	14	0	C	C	C	—	—
Wed., 21	30.048	66	78	54	69	30	58	52	W	W	W	7	14	8	O	F	C	—	—
Thurs., 22	30.105	71	84	57	59	25	51	45	W	NW	W	6	11	3	C	C	C	—	—
Fri., 23	30 058	72	80	59	51	53	66	57	Calm	E	SW	0	3	10	H	F	O	—	—
Sat., 24	29.918	80	94	69	74	44	76	65	SW	SW	SW	8	6	7	C	F	F	—	—
Means, the week.	29.927	69	94	54				64										7.45	.23

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

HARVARD MEDICAL SCHOOL.

The following were the graduates in medicine at the Harvard Commencement June 28th: —

FOUR YEARS' COURSE.

Henry Fiske Adams, *cum laude.*
Hayward Warren Cushing, A. B., *cum laude.*
Edward Pearson Elliott, A. B., *cum laude.*
Royal Whitman, *cum laude.*
Herbert Baker Whitney, A. B., *cum laude.*
Benjamin Seaver Blanchard.
Joseph Eddy Clark.
George Pierce Twitchell.
Alley Talbot Wakefield, A. B.

THREE YEARS' COURSE.

William Henry Aiken, A. B.
Gardner Weld Allen, A. B.
William A. Applegate.
Edgar Chester Atkins.
Frank Sumner Atwood.
Reed McColloch Baird.
Fred Jason Beckwith, A. B.
Enos Hoyt Bigelow, B. S.
Henry Winslow Boutwell.
Cary Carpenter Bradford.
Charles How Bradley.
Thomas Joseph Broderick.
Stephen Driver Brooks, A. B.
William Tyler Browne, Ph. B.
Howard Mendenhall Buck, A. B.
Allen Burdick.
Arthur Joseph Burgess.
Charles Henry Burr, S. B.
Maurice Dwight Clarke, A. B.
John Abbott Crosby, S. B.
Charles Frederic Denny.
Ernest Edgar Doble.
George Smith Dodge.
Benedict Donovan.
Frank Haynes Drew.
Willard Henry Fales, A. B.
Robert Harris Faunce.
Warren Woden Foster.
Eugene Thomas Galligan.
Thatcher Goddard.
Ossian Wilbur Goss.
Josiah Newhall Hall, S. B.
Nathaniel Hibbard, A. B.
William Daniel Holden.
William Dennison Holmes.
John Homans, A. B.
Leonard Jarvis, S. B.
Herbert Stanton Jordan.
William Beckford Kibbey.
Samuel Ayer Kimball, A. B.
Rufus Anderson Kingman.
Thomas Joseph Lawler.
William Harvey Litchfield.
Frederic Howard Lombard, A. B.
Warren Plimpton Lombard, A. B.
Orrison Swett Marden, A. M., LL. B.
Atherton Perry Mason, A. B.
Herbert Weston McLauthlin, A. B.
George Norton Miller, A. B.
Charles Fisher Mills.
John Gavin Morris, A. B.
William Frank Morrison.
Samuel Newell Nelson, A. B.
Otis Kimball Newell.
Asa Harden Nickerson.
Ephraim Wood Norwood, A. M.
William David Otterson.
Charles Edwin Prior, A. B.
Dana Putnam Richardson.
Andrew Francis Shea.
Mapes Rogers Simmons.
Charles Frederic Sinclair, B. D.
Howard Hutchins Smith, Ph, B.
Willard Everett Smith, A. B.
George Augustus Stickney.
James Francis Sullivan.
Roscoe Wesley Swan, B. S.
Henry Lee Sweeny.
Frederic Weston Taylor, A. B.
Frederick Tuckerman, B. S.
Herman Frank Vickery, A. B.
Frank Edward Weil.
Charles Galen Weston.
Roswell Wetherbee.
George Henry Whitaker Whiteside.
George Franklin Woodbury.
Lemuel Fox Woodward, B. S.

The theses of the following candidates were recommended for publication: —

Atherton Perry Mason, A. B., Erythroxylon Coca; its Physiological Effect, and especially its Effect on the Excretion of Urea by the Kidneys. Royal Whitman, Suicide. Herbert Baker Whitney, A. B., on Percussion of the Heart in Health and Disease.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 24, 1882, TO JUNE 30, 1882.

By direction of the Secretary of War the Medical Examining Board, convened in New York City by S. O. No. 223, October 30, 1877, from A. G. O., is dissolved, to take effect June 30, 1882, and the following named officers, now members of the Board, will report by letter to the Surgeon-General: Major Joseph B. Brown, surgeon; Major Joseph H. Bill, surgeon; Major Charles H. Alden, surgeon. S. O. 147, A. G. O., June 26, 1882.

Banister, J. M., first lieutenant and assistant surgeon. When relieved by Assistant Surgeon De Loffre, to proceed to camp of Ninth Cavalry near Cantonment on the Uncompahgre River, Colo., and report to the commanding officer for duty. S. O. 124, Department of the Missouri, C. S.

Lectures.

ABSTRACT OF THE HARVEIAN ORATION DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, JUNE 24, 1882.

BY GEORGE JOHNSON, M. D., F. R. S.,

Fellow of the Royal College of Physicians, Professor of Clinical Medicine in King's College, Senior Physician to King's College Hospital.

Dr. Johnson began his oration by referring to the systematic attempts which have recently been made in Italy, first, to deprive the illustrious Harvey of the honor which for two centuries and a half has by almost universal consent been conceded to him as the discoverer of the circulation of the blood, and second, to claim for the Italian Cesalpino the credit of having anticipated Harvey. In 1876 a monument in honor of Cesalpino was uncovered in Rome. At the inauguration of that monument, in the presence of a large assembly of Italian notables, orations were delivered by Professors Scalzi and Maggiorani. Both orators referred in terms of praise to a recently published work[1] by Dr. Ceradini, professor of physiology in the University of Genoa. The author of this work professes to give the true history of the discovery of the circulation, and he maintains that Harvey during the four years, from 1598 to 1602, which he spent as a student of medicine at Padua, learnt from the writings of Cesalpino, the chief of which had been published about thirty years before, the doctrine of the circulation, which, in the year 1628, he published as his own. Dr. Ceradini admits that Harvey, having undergone great labor in his endeavor to make the doctrine known, and to overcome the prejudices of those who opposed it, may, to some extent, be pardoned for having at length persuaded himself that Cesalpino's discovery was actually his own, but this, he maintains, affords no excuse for the conduct of Harvey's fellow-countrymen, who still believe, or pretend to believe, him to have been the discoverer of the circulation, perhaps, he sarcastically adds, in order not to deprive themselves of the pretext for an annual festal celebration of his memory!

The orator then proceeded to show how utterly without foundation are these charges of plagiarism against Harvey, who could not have obtained from Cesalpino's writings that which is not to be found therein, namely, a knowledge of the circulation of the blood. It was shown by quotations from Cesalpino's works that in no respect was his knowledge of the circulation in advance of that of his contemporaries and immediate predecessors. Before the publication of Harvey's great discovery it was known that the blood, entering the right side of the heart, passes through the lungs to the left side of the heart, and thence into the aorta and its branches; but the course of the blood after it had been sent into the systemic arteries (that is, the arteries of the body in general as distinguished from those of the lungs) was quite unknown. Cesalpino thought that during the waking state the blood passed from the arteries into the nerves, while during sleep it returned to the heart by the veins.

Dr. Ceradini relies mainly upon three arguments to establish Cesalpino's claim to be the discoverer of the circulation: First. He was the first to use the term "circulation." Second. He described the passage of the blood from the arteries through the capillaries to the veins. Third. He demonstrated the fact that when a ligature is applied to a vein the vessel swells beyond the ligature. In reply to these statements Dr. Johnson argues: First. That the fact of Cesalpino having applied the term "circulation" only to the passage of the blood through the lungs is so far evidence that he was ignorant of the general or so-called systemic circulation. Second. The Latin word "capillamenta," which Dr. Ceradini translates "capillaries," as if Cesalpino, without a microscope, had discovered the minute net-work of blood-vessels which intervenes between the terminal arteries and veins, — this word is used by Cesalpino to express an imaginary ending of the systemic arteries and veins in nerves. In short, Cesalpino believed, with his admired master Aristotle, that the nerves were nothing more than the capillamentous or hair-like terminations of the aorta, and he was entirely ignorant of the capillary blood-vessels which the Italian Malpighi, with the aid of lenses first saw about the middle of the seventeenth century.

With regard to the effect of ligaturing a vein, Cesalpino saw no more than had been seen for centuries before by those who practiced venesection — namely, that the vessel swells on the distal side of the ligature. This fact, which is so easy of explanation when once it is known that the blood is perpetually passing through the veins towards the heart, received no explanation from Cesalpino, who believed that the blood returned through the veins to the heart only during sleep; but he suggests that when a vein is obstructed at other times "perhaps the blood at the time returns to its source (the heart), lest being cut off it should be extinguished."

Several passages from Cesalpino's writings were quoted to show his belief that in certain veins and at certain times the course of the blood is from their trunks to their branches, and that during the waking state there is some reflux of blood from the aorta into the heart, a belief which, the orator remarked, is utterly inconsistent with a knowledge of the circulation as revealed by Harvey.

Great and various as were Cesalpino's acquirements in different departments of natural science, more especially in botany, as regards the physiology of the circulation his knowledge was not in advance of that of his contemporaries.

To turn from Cesalpino's doubtful and contradictory utterances, and his peripatetic fancies with regard to the circulation, to Harvey's clear statements and exact reasoning, is like coming from a dark and stifling cave into fresh air and bright sunshine.

I propose, in conclusion, to give one extract from Harvey's treatise On the Motion of the Heart and Blood, which affords a good example of his style, and which is especially interesting from its containing in a few sentences an illustration of the process of observation and reasoning which led up to his great discovery of the systemic circulation:[1] —

"When I surveyed my mass of evidence, whether derived from vivisections and my various reflections on them, or from the ventricles of the heart and the vessels that enter into and issue from them. the symmetry and size of these conduits, — for nature, doing nothing in vain, would never have given them so large a relative size without a purpose, — or from the arrangement and intimate structure of the valves in particular, and of the other parts of the heart in general, with many things besides, I frequently and seriously bethought me, and long resolved in my mind, what might be the quantity of blood which was transmitted, in how short a time its passage might be effected, and the like; and not finding it possible that this could be supplied by the juices of the ingested aliment, without the veins on the one hand becoming drained, and the arteries on the other getting ruptured through excessive charge of blood, unless the blood should somehow find its way from the arteries into the veins and so return to the right side of the heart, I began to think whether there might not be A MOTION AS IT WERE IN A CIRCLE. Now this I afterwards found to be true; and I finally saw that the blood, forced by the action of the left ventricle into the arteries, was distributed to the body at large and its several parts, in the same manner as it is sent through the lungs, impelled by the right ventricle into the pulmonary artery; and that it then passed through the veins and along the vena cava, and so round to the left ventricle in the manner already indicated; which motion we may be allowed to call circular."[1]

---

[1] La Scoperta della Circolazione del Sangue. Milano, 1876.

[1] M. Flourens, in his Histoire de la Découverte de la Circulation du Sang, 1854, page 30, says of Harvey's treatise: "Le livre d'Harvey est un chef-d'œuvre. Ce petit livre de cent pages est le plus beau livre de physiologie." For his favorable judgment of Harvey, however, the author is severely taken to task by Dr. Ceradini, pages 206, 207.

It was the recognition and proof, by numerous observations and experiments, of the incessant propulsion of the blood by the contractions of the left ventricle of the heart through the systemic arteries into the veins, and so back to the right side of the heart; that constituted Harvey's discovery of the greater or systemic circulation.

Harvey, as we have seen, obtained his anatomical knowledge at Padua under the famous Fabricius, of whom he speaks with gratitude and reverence[2] as "the celebrated Hieronymus Fabricius of Acquapendente, a most skillful anatomist and venerable old man." While, therefore, we cannot concede to Cesalpino the honor of having discovered the circulation of the blood, a distinction which he himself would probably never have thought of claiming, we willingly express our gratitude to Italy for having given our celebrated countryman the anatomical training without which he could not have made his great discovery, — a discovery which, throughout all ages and by all civilized nations, will be looked upon as the foundation of modern physiology, and therefore of scientific medicine.

Original Articles.

MEDICAL EXPERT TESTIMONY.

ABSTRACT OF AN ADDRESS BEFORE THE WORCESTER DISTRICT MEDICAL SOCIETY.

BY J. MARCUS RICE, M. D., WORCESTER.

THE address at the annual meeting of the Worcester District Medical Society, held at Worcester, May 10th, of this year, was by Dr. J. Marcus Rice, of that city, and on the subject of Medical Expert Testimony in Courts. The following is an abstract of the paper: —

Dr. Rice said that physicians are frequently called upon to testify in courts in regard to facts which may have come under their professional observation, and that in such cases they occupy the same position as other witnesses, and are expected to answer the whole truth even although it involves criminal acts, the disclosure of which was necessary to enable the patient to place himself in the best condition for recovery. They are not protected as is the priest in the confessional or the legal counsel of the prisoner. Even the officer who has the prisoner in custody is not allowed to testify to anything which was imparted under the promise of leniency or other substantial benefit. This seems hardly equitable, and is not the practice in some of the other States.

In New York, for instance, the statute reads that "no person duly authorized to practice physic or surgery shall be *allowed* to disclose any information which he has acquired in attending a patient in a professional character, which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon."

This exclusion includes all means of knowledge whether of statements by the patient or by symptoms and appearances observed, and in practice it is assumed that when the fact of attendance is shown the disclosures made were for the purpose of enabling the physician to prescribe more effectually. Even the death of the patient does not in some cases cause a lapse of these rights. Should the patient waive his right the physician cannot then refuse to testify unless such answer would criminate himself. In cases of murder and manslaughter this immunity for the patient does not obtain.

After testifying to the facts as indicated we may be asked to give an opinion based upon them or on statement of other witnesses, or we may have a long array of hypothetical questions propounded by learned counsel, who desire such answers as will best suit their own side of the case. In giving an opinion upon facts stated, or an assumed statement, we are placed in a position of grave responsibility, for not unfrequently the property, liberty, or even the life of some person may be jeopardized by the answers given. In the ordinary duties of our profession we are constantly called upon to decide questions involving the health and lives committed to our care, but the solemnity of a court adds dignity to the decision, and we cannot there excuse lack of skill or lapses of memory by attributing untoward results to the disturbing element of disease. The case for the witness at least is made up while testifying, and a mistake once made is not easily rectified. The physician thus called on is made to assume the position of an expert, and placed at the mercy of counsel, who, instead of striving to arrive at the truth, may be much more interested to conceal it, or obscure the opinion given. The case is even worse when those interested on each side secure medical men, by offers of large fees or emoluments, to assume sides in the trial to listen to the testimony of other medical men, not for the purpose of giving effect to the truth, but to pervert their meaning, and impugn their motives.

The antagonism of opinion thus stimulated and developed has become so marked that in nearly all important trials of the last few years involving medical points, the newspapers have been filled with comments and reflections on the inexactness of medical science and chemical knowledge.

The medical fraternity in this region are but slightly open to criticism from this cause, yet it is a disturbing element which should be eliminated from the courts.

The ordinary practice is for the counsel to confer with medical experts before the trial. This statement is an *ex parte* one, and is naturally tinged by his views. The expert hearing but one side, and conscious that unless he agrees with that view he will not be employed, almost unconsciously finds himself studying that side only, forming theories to meet these views, and bolstering opinions by all means which his learning, and the intelligence and suggestions of counsel, can afford. Later, and often too late, he finds that the other side has an entirely different set of facts, which, if known to him, would have modified his opinion and controlled his testimony.

---

[1] Coll. Ed., page 48; Dr. Willis, pages 45, 46.

[2] Coll. Ed., page 65; Dr. Willis's Trans., page 62.

Some of the difficulties which beset us are inseparable from our position, for although medicine is a science, its problems cannot be demonstrated with the exactitude of mathematics, and it is subject to correction by the teachings of experience and experiments even in this age of intellectual activity, while its instruments of precision frequently only lead far enough to halt us on the very confines of progress. Failure furnishes no sufficient ground for despondency, and should only stimulate us to renewed exertion and greater zeal, for ours is not of the transcendental school where fancy roams in quest of knowledge, and occupies the place where judgment and observation should stand.

The frequency of the plea of insanity as a bar to responsibility for crime compels the medical expert to give it extended consideration. At the outset it is difficult to define insanity in such manner that the average juryman can understand it. The prosecuting officers formulate the doctrine that those persons who can distinguish between right and wrong are responsible, that impulse goes for nothing; but this rule would bring under penalty a large portion of the inmates of our insane hospitals and asylums, and all physicians can recall instances which show the absurdity of this rule.

We know that insane impulse may be controlled under favorable conditions, and that the power of the mind will sometimes be effective to restrain from the commission of crime while at others unable to do so.

We see also the insane are restrained from violence by the comparatively mild means used in well-managed hospitals, who are uncontrolled by the severer penalties of laws further removed from their observation.

When the defense of a prisoner is insanity, imbecility, or such other morbid condition as would relieve from responsibility, the burden of proof is upon the defense, and the testimony must be sufficient to overthrow the legal presumption of sanity, and to convince the jury that he was at the time the deed was committed unable to distinguish between right and wrong. The prosecuting officers scout the idea of emotional insanity, insanity of the will, or moral insanity, or insane impulse. In one case the court ruled that no imaginary inspiration could excuse crime where the nature of the act done and its probable consequences to the injured party, and that it was in itself wrong, were known to the actor. To this it may be said that to the person hearing the voice of God commanding him to do some act the inspiration is real.

When an insane person has committed a homicide it becomes a serious question whether he should ever again be set at liberty, for such persons are notoriously dangerous, and society has a right to protect its innocent members even at the expense of an occasional hardship to others.

In the National House of Representatives, January 9, 1882, the following bill, defining the law of insanity in criminal cases, was introduced: —

> *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* that no person indicted in the District of Columbia, or in any Territory of the United States, or in any court of the United States, shall be acquitted on the ground of insanity, under which designation is to be included idiocy, lunacy, or other unsoundness of mind, except upon proof that at the time of committing the offense charged he was laboring under such a defect of reason as either, —
>
> First, not to know the nature and quality of the act he was doing; or,
>
> Second, not to know that the act was unlawful or wrong.
>
> Section 2. That a morbid propensity to commit prohibited acts existing in the mind of a person who is not shown to have been incapable of knowing the unlawfulness or wrongfulness of such acts shall form no defense to a prosecution therefor.
>
> Section 3. That whenever upon the trial of an indictment in any court of the United States, or in the District of Columbia, or in any of the Territories, the jury shall find the defendant not guilty, they shall, at the request of the prosecuting attorney, state whether they acquit the defendant on the ground of insanity; and if they answer affirmatively, the statement shall be entered in the minutes of the trial, and the court shall thereupon order the defendant to be committed to an asylum or hospital for the insane, to be there kept in close custody until discharged in due course of law.

The ground of this bill was that taken in the trial of Guiteau, the government putting forth its strength to show that he knew the act was contrary to law, and that knowing this, he was responsible. This trial presents some of the most singular incidents of modern times. For instance, a large number of the government witnesses testified that the assassin was feigning insanity at the time of the trial, while the others were of a contrary opinion. This is of immense importance in estimating the value of their opinions as to the condition of the prisoner at the time of the homicide. If they could not with the prisoner before them, with almost every act of his life known to them, and with the opportunity to study his conduct, agree on his then mental condition, what was their judgment worth as to his mental condition at the time of the crime of which they only had hearsay and conflicting evidence?

The bill before Congress intending to define insanity will not receive the approval of those who have studied mental diseases, for it excludes a great number of cases which should be protected. There are cases where the impulse to kill is irresistible, although the actor is fully conscious of the law and the penalty.

In most cases the act follows quickly on the delusion, but in others much time may elapse, and the insane person may make carefully contrived and secret plans with modifications to meet them, and frequently exhibits mechanical skill with powers of combination and concentration, and it is difficult under these conditions to convince the laity that such persons are not responsible for their acts.

In cases of alleged malpractice the physician is sometimes compelled to appear in court in the double rôle of defendant and expert.

Such actions are, however, quite rare in this region; but it is well to understand that any physician may be called on to defend his line of treatment, and that it is dangerous in such cases to depend upon the statements of patients and their friends. To avoid trouble, it is well in all important surgical cases, at least, to have the assistance of another trustworthy medical man, in order that the diagnosis may be susceptible of proof by another than himself, who may also be disinterested. With these and a full record of the case such troubles may be met as they arise. The legal rule requires the physician to give to the case such reasonable care and skill as is common to the profession; he does not undertake to perform a cure, nor even to bring the highest attainable knowledge and extraordinary skill, such as can only be obtained by few persons. He undertakes to use that ordinary skill and care for the best interest of the patient; he will be expected to anticipate conditions that may arise, and be ready to meet them in the best manner. In these things he will have to depend upon his own testimony, with the disadvantage, on the witness stand, of being pecuniarily interested, and having his professional reputation at stake. He should treat the case with entire fairness, and show to the court and jury that he has confidence in his course, by giving full and careful answers, without reserve or hesitation, as he will thereby secure the confidence of the jury both in his skill and honesty. The legal rule requires on the part of the patient that he shall obey the directions of his physician, thus placing himself in the best possible condition for recovery.

The medical expert should remember that he is called in the interest of truth and justice and not to secure the success of either side, although his fee is generally under our present system paid by one side only. He should be calm, collected, and impartial, uninfluenced by popular prejudice, and in condition to fully understand the import of the questions and answers given.

Counsel demand a "yes" or "no" answer, but an expert has a right to use such language as will best express his meaning and should insist upon that right. It is better, when the subject admits, to answer "yes" or "no" first, and then add such explanation as he thinks necessary. It is better to avoid the use of technical terms and phrases when possible, to avoid discussion and criticism, and to be intelligible to the average juror. The expert should not volunteer statements or give an opinion on the merits of the case. If he is called as counsel and sits beside the lawyer to suggest questions, and the line of conduct in a case, it would be better for him not to appear upon the witness stand.

Several cases illustrating the positions taken in the paper were reported, and, in conclusion, it was suggested, as a remedy for the evils complained of, that medical experts might be selected by the courts and paid by both parties without regard to the testimony given, or the case might be stated in detail without his knowing which side would be benefited by his answers. Another system might be for a jury of experts to be made up for all important trials to whom should be submitted all the facts in the case for their final decision.

By the latter plan the right of trial by jury would be retained, though much modified, for now it is frequently an object to secure a jury of ignorant or irresponsible men, as these can be more easily influenced by appeals to passion and sympathy. If the courts had the power and duty to call for the aid of medical men who were as independent as the judges, and who should have every facility for the study of the case in hand, a great advance would be made in the right direction, and the chief sources of abuse in the calling of medical experts would thus be destroyed. Hypothetical questions would not then be allowed, but the trial would be based upon the actual facts.

Appropriate tribute was paid by the speaker to the two members of the Society who have deceased during the year, Dr. Edward Wheeler, of Spencer, and Dr. John G. Thomas, of Worcester.

◆

PANCREATIC APOPLEXY, WITH A REPORT OF TWO CASES.[1]

BY MORTON PRINCE, M. D.

I AM indebted to Dr. John G. Blake, who has kindly allowed me to make use of the notes of the following case, taken from the records of his service at the Boston City Hospital: —

P. B., twenty-two years old, teamster, strong and well built. At the commencement of his illness was a prisoner in Charles Street Jail, where he had been under observation for a number of weeks. During this time he had been perfectly well. About a week before the attack, according to the accounts of the other prisoners, he had complained of a sharp pain in lower part of abdomen immediately after turning a handspring. He then remarked that he "guessed he would not do that again." No further complaint was heard from him. During the night of July 7, 1881, he was suddenly taken with severe cramps in his stomach, "doubling him up," vomiting, chills, and sweating. When first seen by the jail attendants in the morning he was in a collapsed condition, and said to be in about the same state as when I first saw him a little before noon, when his condition was as follows: Extremities and surface cold, face pale and covered with a cold sweat. He was anxious and restless, tossing about on the bed, so that only with difficulty could he be kept covered. He complained of severe cramps in the abdomen. Tenderness was not marked, except in the region of the umbilicus, where a circumscribed spot was found, after exploration by the patient. He said that he had vomited a good deal, but that the bowels had not moved since the preceding day. The temperature in the axilla was normal. The pulse at the wrist was rapid, feeble, and could not be counted. No other symptoms. A hot poultice was ordered to the abdomen, heaters to the feet, etc. Brandy and laudanum were to be given in repeated doses till relief obtained.

During the afternoon he continued in about the same condition. He was said to have vomited everything taken. Among the most prominent symptoms were the anxiety and restlessness, which were so marked as to render it impossible to keep him covered with the clothes, and to mask the pain from which he undoubtedly suffered. As proper facilities for treatment were wanting in the jail, steps were taken to transfer him to the City Hospital, where he arrived in the evening and came under the care of Dr. J. G. Blake. The records here show that on entrance he was in about the same condition as described above.

℞ Morph. sulphatis one eighth of a grain subcutaneously. Two ounces of brandy per rectum were given and repeated, with one ounce of spirits of turpentine at the end of an hour and three quarters. Heaters and turpentine stupes applied. Slept some. Four dark-colored dejections.

The next morning (July 9th) his condition was the same; "nearly pulseless at wrist; extremities cold;

---

[1] Read before the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, May 6, 1882.

face and extremities cyanotic;" vomiting continuous as before. Temperature 100.8° F. Fourteen dejections during the day. ℞ Enemata of brandy.

P. M. Thirsty; watched to keep in bed; feet and legs warm, hands and arms cold; tongue very dry; very restless. At three P. M., in view of this collapsed condition, Dr. Blake decided to try the intravenous injection of milk, and six ounces were introduced into a vein. During the night enemata of brandy and milk were ordered. As a result of this treatment considerable improvement set in; the symptoms of collapse subsided, the pulse improved, and the patient slept during the latter part of the night.

The next morning (July 10th) the record reads: "Appears much brighter; face not cyanotic; vomited once during the night; two dejections this morning; retains milk and lime water." Temperature 97.5° F. Enemata of beef juice, brandy, and ten drops of elixir of opium were ordered every three hours, but were not retained during the following night. Evening, temperature 99.2° F.

July 11th. Condition about the same, but had hiccough. Temperature A. M. and P. M. 98.2° F. During night vomited a good deal, and did not retain enemata or medicine.

July 12th. Hydrocyanic acid, dilute, was given in three-minim doses every three hours. Temperature A. M. 98.8° F.; P. M. 100° F. The patient began to improve, and on the 13th the record runs: "No vomiting; better. Omit hydrocyanic acid." At this time there was great improvement in the patient's condition. He appeared bright and comfortable, free from pain, with a good pulse, and it seemed probable that recovery would take place. The temperature, however, ran up in the evening from 99.5° F. to 101.2° F.

On July 14th there was a temporary return of the hiccough and vomiting, and the temperature rose to 102.2° F. During the succeeding five days he remained pretty comfortable, though there was some pain and tenderness over the abdomen. The temperature fell to something below normal, 97.8°–98.2° F. The pulse remained at 95–100, regular, and of good strength; the vomiting and hiccough did not return, and the patient took stimulants, and milk and lime water well by the stomach. But the diarrhœa persisted throughout the illness.

July 20th. Seven dejections last night, green and watery; still some pain and tenderness in the region of the navel; appetite fair. Takes chicken broth and milk. Temperature A. M. 100.8° F.; P. M. 99.8° F. ℞ Copper and opium pill, one after each second dejection, but not oftener than every four hours.

P. M. Diarrhœa ameliorated. Omit pills. ℞ Quinine, two grains three times a day.

July 21st. The vomiting returned, with severe pain in the epigastrium. Temperature A. M. 102.2° F.; P. M. 99.5° F.; pulse 105. Four dejections. The vomiting and pain persisted throughout the next day (July 22d), when considerable tympanites appeared. Temperature A. M. 102.2° F.; P. M. 100.8° F. In the evening of this day the patient failed rapidly, the pain increased in severity, and he died at 11.30 P. M.

Extract from autopsy by Dr. Gannett: —

Abdomen. On opening the abdominal cavity it was found that the peritoneal surface of the anterior abdominal wall was adherent to the omentum and to the folds of the intestine. The loops of intestine were distended with gas, were of a bluish-black color, dead glance, and were united together, but could be separated by a moderate degree of force. In the peritoneal cavity were one hundred and twenty cubic centimetres of a thin, black fluid. On lifting up the omentum, and then separating the folds of the small intestine, which were adherent to the under surface of the transverse colon, there appeared a ragged, blackish mass, from a small tear through which there poured out a large quantity of a thick chocolate-colored fluid with a slightly reddish tint; also two or three coagula size of an egg, of a soft gelatinous consistence, and of a bluish-black color. All the abdominal organs were then removed *en masse* and examined.

Pancreas. The seat of the pancreas was found to be occupied by a black, shreddy, sloughy, soft, gangrenous mass, these characteristics being most marked in the central region of the organ. The head and tail of the pancreas were represented by a central portion of a black, sloughy mass, in which no trace of gland structure was to be made out, and an external portion formed, as it were, a sort of capsule for the central sloughy portion, made up of the proper gland structure of the pancreas, the more central portions of which gradually shaded off into the sloughy, black, irrecognizable central portion. That portion of the pancreas in close proximity to the duodenum showed the most preserved gland substance, and this was from seven to ten millimetres in thickness.

No attempt was made to discover the artery of the pancreas, but the heart was examined with great care for a possible source of emboli, but no trace of such a source discovered.

The mesentery of the upper portion of the jejunum, this being the part adherent to the lower border of the transverse colon, showed a considerable collection of thick greenish-yellow pus between the folds.

Liver, spleen, kidneys, heart, pericardium, pleura, and aorta, showed nothing unusual. The lungs, likewise, were normal with the exception of two nodules, the size of a hen's egg, in upper part of middle lobe, and one similar nodule in the lower lobe of right lung. The lung substance in these nodules was of a blackish color, and very shreddy. [Question whether the nodules were not simply the result of some of the contents of the stomach getting into the bronchi and digesting a portion of the lung substance. The nodules showed no signs of anything of an inflammatory character, or even of the nature of anæmic necrosis.]

Friedreich[1] divides hæmorrhage into the pancreas into two kinds: one in which the hæmorrhage is circumscribed and forms a cyst containing blood; and second, "hæmorrhagic processes — which must be distinguished from those just described — in which the entire pancreas takes on a hæmorrhagic condition without any interstitial inflammatory changes, or gross alterations being appreciable in the vascular system." Chvostek, in a very complete article[2] on the subject, divides hæmorrhages of the pancreas into seven varieties.

(1.) As a part of a hæmorrhagic diathesis.

(2.) From traumatic causes.

(3.) In rare cases, without apparent cause, larger centres of hæmorrhage occur. In a case reported by Störk, the pancreas was transformed into a sac filled with coagulated blood and weighed thirteen pounds. (Chvostek thinks this may have been an aneurism.)

---

[1] Ziem. Cyclop. of Med.

[2] Wien. Med. Blätter. 27 Nov. 1879, No. 48, ii. Jahrg.

(4.) Hæmorrhages occur sometimes as a result of venous congestion of the vessels of the portal system, due to disease of these vessels themselves; of the liver, or of the heart or lungs. This form was first described by Klob[1] as an "interstitial hæmorrhage into the pancreas." With it is associated an hyperplasia of the connective tissue.

(5.) A peculiar form first brought prominently into notice by Klebs. This is the second variety of Friedreich, "in which the entire pancreas takes on a hæmorrhagic condition."

(6.) A variety resembling the last, in that there is found an extensive hæmorrhagic infiltration throughout the whole organ, but with the difference, that along with it there exists an extreme fatty degeneration of the substance of the gland, and of the neighboring cellular tissue. Four examples of this kind have been reported, three by Zenker and one by Hooper.

(7.) Hæmorrhage into preëxisting cysts.

To these should be added another (eighth) variety in which there are hæmorrhages scattered throughout the pancreas as a result probably of acute inflammation.

It is with the fifth and sixth forms that we are here directly interested, and which will be here described together, as they cannot clinically be distinguished.

The gland itself may be normal in shape and size (Draper's case[2]), or enlarged to double its normal size from the infiltrated blood (Hilty[3]). If death has occurred within the first few days before secondary changes have taken place, the gland will be found to be of firm consistence, and on section of a dark red color from a general infiltration of blood into the interlobular tissue throughout nearly its whole substance, though the hæmorrhage may be more abundant in one spot. On the other hand, the hæmorrhage, instead of being diffused in this manner, may be localized in several foci or nodules of greater or less size.

One of the most noteworthy and constant appearances is the hæmorrhage which so commonly takes place into the cellular tissue surrounding the gland. This condition was found nine times out of eleven cases in which it could be determined.

Later on, if life be sufficiently prolonged, the gland seems to melt down, possibly as the effect of the pancreatic secretion upon the effused blood, into a semi-solid gangrenous mass, consisting of decomposed blood and gland substance. Peritonitis then results with all its characteristic appearances.

The surrounding cellular tissue may in prolonged cases take on suppurative inflammation, due perhaps to secondary changes in the blood which has been effused into it; the cellular tissue itself breaks down, and, finally, the gland is found lying in a slough cavity containing decomposed blood and pus.

These pathological changes have been thus described by Klebs,[4] to whom we are indebted for bringing the subject into notice: "The whole gland is of a dark red or violet color, the meshes of the interstitial tissue are filled with fresh or altered blood, and the acini are tinged of a dead gray color or with diffused blood pigment. The hæmorrhage may spread around the gland, more especially into the retro-peritoneal connective tissue. Later on the gland becomes soft; the serous covering of its anterior surface sloughs, and masses of broken down gland substance get into the peritoneal cavity. Death sometimes occurs very suddenly in these cases, so that at times the peritonæum does not present any secondary changes at all."

In another class of cases (fifth category of Choostek, fatty and hæmorrhagic degeneration of Molliere[5]) there is found an extensive fatty degeneration of the substance of the gland, the follicles being replaced by fat. Four such cases have been reported, one by Hooper,[6] and three by Zenker.[7] In one of the latter's cases this condition was so extreme that "not a single gland cell remained." The subjects of Zenker's cases are described as being very fat. In Hooper's case, the subject of which was said to have a "fat, florid complexion," there was an ordinary fatty liver, and a great deal of fat in the omentum and around the kidney. In other cases there is no fatty change in the pancreas, but there is found such a degeneration of the liver and heart.

The microscopic appearances in a case where the hæmorrhage was localized in nodules have thus been described by Dr. W. F. Whitney:[8] The microscopic examination showed the color of the nodules was due to the presence of diffused coloring matter in the tissue, while there were to be seen scattered clumps of amorphous blood-coloring matter in the interlobular spaces, the white discoloration [of the interlobular tissue] being caused by the presence of vast numbers of short, staff, or spindle-shaped crystals in the fat tissue. The outline of the pancreatic cells was lost, and their nuclei were indistinct and failed to take coloring matter, but osmic acid, aside from turning the whole section of a uniform dark brown, failed to reveal the presence of a fatty degeneration.

Clinically those cases where there is fatty degeneration of the pancreas cannot be distinguished from others where no such change is found, and I do not see any sufficient reason for differentiating them as has been done by some writers; consequently they will be considered here together.

The following description of the disease is based upon fourteen cases, which I have been able to collect either from published accounts, or directly from the records furnished me by the physicians themselves in whose practice they occurred. I should say that in no case, save one, have the accounts been taken at second hand, but in every case the original articles have been examined. I must admit that one or two cases included here are open to criticism as true cases of pancreatic hæmorrhage, but, on the other hand, I have admitted no case without careful consideration, nor without other authority than my own for doing so. Thus Loeschner's case was originally reported as one of pancreatitis, but Klebs regards it rather as one of hæmorrhage, and this appears to me to be borne out by the autopsy. Haller and Klob's case, on the other hand, included by Klebs, I have rejected. It must be borne in mind that when these cases were originally reported little was known of the condition under discussion, and the lesions found after death were naturally ascribed to inflammation. The one exception noted above as taken at second hand is Portal's case. The original report of this I have been unable to find, though the volume which has been most carefully referred to by several writers has been searched by two other gentlemen beside myself.

---

[1] Oesterreich. Zeitschr. für practische Heilkunde, August 17, 1860. vi. Jahrg. No. 33.

[2] Boston Medical and Surgical Journal, vol. ciii., p. 613.

[3] Schweiz. corr. Bl. vii., 22, 1877; and Schmidt's Jahrb., 179 Bd., s. 241.

[4] Handbuch. der Patalog. Anat. Berlin, 1870, pp. 549, 555; quoted by Friedreich, loc. cit. and Chvostek, loc. cit. This translation is taken from Friedreich's article, Amer. ed.

[5] Nouv. Diction. de Med. et de. Chirurg. Prat.

[6] Archiv. of Med., ii., 1861, p. 282.

[7] Tagblatt der 47, Versammlung deutsch. Naturforsch. und Aerzte in Breslau, 1874, p. 211.

[8] Boston Medical and Surgical Journal, December 22, 1881.

I am conscious that this account of the affection is necessarily deficient, and in many respects open to criticism, being based upon a small number of cases. It has been offered on the principle that "half a loaf is better than no bread," and with the hope that it may save others much of the labor imposed upon the writer. It has seemed desirable to the writer to have some systematic, even though faulty, account of this interesting affection, without being obliged to be dependent upon a number of isolated cases scattered through the medical periodicals of all languages.

Sex. — Of fourteen cases two were women and twelve men. Of the two women one must be looked upon as a doubtful case. Men accordingly are more liable to the affection than women.

Age. — All the cases thus far recorded have been adults, ranging from twenty to sixty-five years of age.

SYMPTOMS.

For clinical purposes the cases may be divided into two classes, namely, those which, from the suddenness with which death occurs, may be termed *apoplectic*, and, secondly, those in which life is prolonged from thirty-six hours to twenty days. These latter may be termed relatively *subacute*. For the sake of clearness it will be well to describe each class separately.

I. *The apoplectic form.* — Five cases of this kind are known to have occurred; three are reported by Zenker, and two were met with by Dr. Draper. Unfortunately only two were seen before death occurred. Four were suddenly attacked while in good health. The fifth is supposed to have fallen, when the hæmorrhage occurred, into the water where he was found. No record is made of his previous history. The subjects of three cases are described as very fat; three as intemperate, and one as an epileptic; all but one were males.

The most instructive of these cases is the one occurring in the practice of Dr. Bush, and reported by Draper.[1] The symptoms presented by this patient are the same in kind as those observed in the second or subacute form, the only difference being the earlier date at which death occurred. It is sufficiently interesting to justify my quoting it at length: —

"A man, thirty-one years old, a printer, of intemperate habits, was seized suddenly with pain, which he referred to the epigastrium. Up to the time of this attack he had been in good health, except a slight cold from which he had suffered some inconvenience during the previous week, but which had not confined him at home. At noon on the day of his death he ate his usual hearty dinner. The pain of the attack, which began about six P. M., was soon followed by nausea and an ineffectual attempt to vomit; presently collapse supervened; the patient was scarcely able to speak; he fell from his chair to the floor; he was evidently in extreme distress. In this condition Dr. J. F. Bush saw him, and having prescribed a stimulant (brandy) which seemed to produce a momentary reaction and relief, he directed that the man be taken to the hospital. The patient died very quietly in the carriage on his way thither. The whole duration of the attack was between thirty and forty-five minutes."

In one of Zenker's cases death occurred even more suddenly. "A man, forty-eight years old, who had been previously perfectly well, woke up one morning feeling unwell, and with an inclination to vomit. In a few minutes he fell back dead." Zenker's second case had been seen collecting wood in the forest an hour before he was found dead. This same reporter's third case was found dead in the water. The circumstances were such as to show little doubt of the death being due to the hæmorrhage into the pancreas.

In the last three cases there was found "an extensive hæmorrhagic infiltration of the whole pancreas and of the neighboring loose cellular tissue. There was also extreme fatty degeneration of the gland cells. In two of them blood had escaped into the duodenum. All three subjects were very fat. In Draper's first case there was the same hæmorrhagic condition but no fatty degeneration, and the subject was not fat.

For the fifth case I am also indebted to Dr. Draper, who has kindly furnished me with the following account of it. This is the second case which I have to report: —

"The patient was a woman, sixty-five years old, of very intemperate habits. She earned a scanty living scrubbing the floors of liquor saloons. She lived in squalid misery, occupying an attic room with a woman as degraded as herself. Both women slept in a filthy bed made up on the floor of the room.

"It was stated by the neighbors that on the day before her death the patient, while drunk, had fallen down stairs, but she went out as usual afterwards, and late in the afternoon of the same day (November 17th) came home drunk also as usual. Both women went to bed at their customary hour. Nothing occurred during the night to attract the notice of the patient's bed-fellow, or to awaken her, but at daybreak, when the latter awoke, she found the dead body of her friend, off the mattress, outside the bed-clothing, lying on her right side on the floor.

"When I saw the body, at half past nine A. M. of that day, rigor mortis was well marked, and the exposed parts of the person were cold. The limbs were straight, and there were no indications of struggling. There was considerable lividity of the dependent parts. The body was emaciated.

"An autopsy was made at eleven A. M.

"November 18th. Omitting unessential details, I found the following: —

"Dura mater thick and adherent to calvaria. Moderate excess of serum within meninges. Cerebral convolutions flattened. Brain soft. Moderate injection of vessels over pons varolii. Right middle cerebral artery stiff and atheromatous. Odor of alcohol in brain. Lungs normal. Heart of normal size. Coronary arteries atheromatous. Moderate mitral stenosis. Aortic valves slightly stiffened. Contents of heart presented nothing peculiar. Spleen, kidneys, liver, and stomach healthy. Some injection of vessels of duodenum and upper part of jejunum. Intestines otherwise normal. Nothing wrong about pelvic organs.

"Pancreas. The subperitoneal tissues adjacent to the organ were infiltrated moderately with recently effused blood, giving the parts a reddened appearance. The tissues of the organ itself showed marked hæmorrhagic infiltration throughout, but mostly at its head, which was deeply discolored. The splenic artery was en larged, tortuous, its coats thickened, and its interior rough and granular."

---

[1] Loc. cit.

"The duration of life after the hæmorrhage took place and the symptoms can only be inferred. The fact that rigor mortis was well marked as early as half past nine A. M. shows that death must have taken place some hours previously. It may be that the symptoms were not sufficient to awaken her from her drunken sleep, and death was nearly instantaneous."

(*To be continued.*)

RECENT PROGRESS IN OBSTETRICS.

W. L. RICHARDSON, M. D.

SIGNIFICANCE OF ALBUMINURIA.

Dr. **Ingersley** contributes a valuable paper[1] in which he attributes the great discrepancy among writers to the fact of the insufficient numbers they have based their conclusions upon. According to his own observations he found albuminuria occurring in 29 out of 600 cases. In only seven of these were casts found in the urine. One of these had been a sufferer for some time from Bright's disease. The proportion of albuminuria was the same in multipara as in primipara. He is unable to offer any reasons for the occurrence of albuminuria during pregnancy.

During parturition the writer has seen albuminuria in 50 cases out of 153. In only 15 of these has albumen been discovered before the beginning of labor. All causes which give rise to a protracted labor favor the occurrence of albuminuria. The albumen disappeared within forty-eight hours in 80.5 per cent. In those cases in which eclampsia occurred there was an unusually large amount of albumen, and casts were found in all such cases. The albuminuria found in cases of eclampsia is always of renal origin, of an acute nephritis.

APPLICATION OF FORCEPS AT THE SUPERIOR STRAIT.

M. Obissier discusses[2] the application of the forceps at the superior strait, speaking first of the difficulty and danger of its application above this point, while the head is still movable. Realizing this, version is often to be preferred, especially in a retracted uterus. In such cases as eclampsia, hæmorrhage from a dangerous insertion of the placenta, and some other emergencies, he considers the forceps alone equal to the conditions. Hatin's method of application is generally to be preferred, which consists in introducing the left hand in forced supination into the uterus upon its left side, then passing the left blade along it as a director. The hand is then changed to half pronation, being passed behind the head to the right side of the uterus, and the other blade passed similarly to the first. This is more difficult in execution than in description, and as a substitute the author recommends a method which he has himself adopted. The author being in the classical position, the left hand is carried high up, as if the right blade of the forceps were to be supplied. The head is fixed as firmly as possible with the fingers of the introduced hand placed between the head and the uterus. The left blade of the forceps, well oiled, is then passed with the right hand, being gradually worked into position along the left hand as a director, its convex surface following the palm, and readily adapting itself on the left side of the uterus to the fœtal position. The left blade being in position, and held by an assistant, the right one is passed in the same way to its proper position. The chief advantages claimed are that the operation is done with small expenditure of force, the head remains fixed during the entire process, and the operator's arms are not crossed as in Hatin's method.

HOUR-GLASS CONTRACTION OF THE UTERUS.

Dr. F. Barnes reports[3] a case in which he was called to see a patient who had been delivered by a midwife seven hours previous. The placenta had not come away. A dose of ergot had been given, but with no effect so far as producing any expulsion of the placenta. The external os was dilated as was also the cavity of the cervix. The internal os and the ring of Bandl, just above it, were firmly contracted. It was impossible to introduce the hand within the uterine cavity. Remembering the property possessed by nitrite of amyl of relaxing the tension in blood-vessels, he gave the patient three drops of the amyl on a handkerchief to inhale. During the inhalation the muscular fibres surrounding the internal os gradually relaxed, and he was enabled to pass in his hand and remove the placenta which was universally adherent. No hæmorrhage followed. The case was interesting as showing the danger which is liable to follow the administration of ergot before the expulsion of the placenta; it being impossible to know beforehand whether the placenta is subsequently to be found adherent. Should it be attached, the administration of ergot, if followed by any physiological action, must be to produce the very result most to be dreaded — a firmly contracted uterus enclosing an adherent placenta. It is in such cases that Dr. Barnes believes we shall find nitrite of amyl of great value. It relaxes the irregular contraction of the uterus, and acts as a sedative and anæsthetic without producing unconsciousness.

USE OF IODOFORM IN OBSTETRIC PRACTICE.

Dr. Rehfeldt reports[4] a case in which a patient was attacked with puerperal endometritis on the fourth day after a normal labor. The uterus was washed out with a two per cent. solution of carbolic acid, and an application made to the interior of the uterus of five grains of iodoform. A marked improvement was at once noticed; the lochia becoming normal, the pulse and temperature falling. The occurrence of several abscesses occasioned by the position of the patient delayed the convalescence, which, however, progressed rapidly as soon as the abscesses were healed.

Dr. J. Mann strongly advises[5] that all wounds along the course of the generative tract should be washed with a carbolized wash and then sprinkled with powdered deodorized iodoform, over which iodoform wadding should be applied. In this way he claims that the absorption of septic material is prevented. Under such applications granulation goes on very rapidly.

USE OF SALICYLIC ACID IN OBSTETRICS.

Dr. G. Bayer recommends[6] that the vagina be carefully washed out with a weak solution of Condy's fluid, and then that a mixture of salicylic acid and starch (one part to five) be thrown into the vagina. This treatment has been found of great advantage in the Stuttgart Lying-In Hospital.

---

[1] Zeitschrift für Geburts. u. Gynækol., vi. 2.

[2] Bull. Gén. de Thérap., January 30, 1882. New York Medical Journal, April, 1882.

[3] British Medical Journal, March 18, 1882.

[4] Berl. klin. Wochen., 1882, 9.

[5] Centralblatt f. Gynäkol., 1882, 7.

[6] Centralblatt für Gynäkol., 1882, 10

NITROUS OXIDE AS AN ANÆSTHETIC IN OBSTETRIC PRACTICE.

Dr. Klikowitsch reports[1] the result of a series of experiments of nitrous oxide, used with a view of relieving pain during parturition. He considers it absolutely free from danger to both the mother and child. It has no influence in retarding or hastening the progress of the labor. It acts equally well during either stage of labor, so far as relieving pain is concerned. The patient is not rendered unconscious, and hence is able to use the abdominal muscles to assist in the expulsion of the child. It never produces vomiting, but on the other hand checks it, if it is present. It is not followed by nausea or headache. The anæsthesia may be kept up during the whole course of the labor, as a few whiffs before each uterine pain is sufficient to give relief from the suffering. In his experiments Dr. Klikowitsch used a combination of thirty per cent. nitrous oxide with twenty per cent. of oxygen.

Hospital Practice and Clinical Memoranda.

A CASE OF INTUSSUSCEPTION WITH RECOVERY.[2]

BY S. W. LANGMAID, M. D.

AT the last meeting but one of the Section a fatal case of intussusception was reported by Dr. Rotch. The next day, March 10th, I was called to a female child of five months who was the subject of the same accident. The infant had always been well, and had not been particularly constipated.

I saw her on Friday. She had been well until Tuesday night, when she was restless, desiring to nurse often, but rejecting the nipple immediately. The next day she vomited, and cried out at intervals as if from severe pain. At noon she began to have bloody discharges. The pain and bloody discharges continued until I saw her on Friday. She appeared stupid. The pulse was 120. The abdomen was not distended or tender to pressure. The finger, inserted its whole length in the rectum, encountered a tumor with a central indentation, reminding one by its shape of the neck of the uterus.

Dr. Sumner saw her with me two hours later.

A cylindrical tumor existed in the region of the descending colon. The invaginated intestine had come down to the anus, and, holding the child in the inverted position, was seen to be of a chocolate color. The duration of the lesion, forty-eight to sixty hours, and the appearance of the bowel, decided us against any mechanical interference. The condition of the child remained the same, except that the discharges of blood became less frequent and smaller until Sunday night, when the patient became brighter, nursed, and retained the food. On Monday there were two natural dejections, the tumor had disappeared, and the child was well.

I suppose the different result of this case from that reported at the last meeting was due to the situation of the lesion.

Dr. Whitney says that in the palliative treatment of intussusception a spontaneous cure is observed in fifty per cent. of the cases. It seems to me that the prognosis must depend very much upon the situation of the intussusception. If it occurs in the small intestines, and especially if the ileo-cœcal valve is invaginated, the chances of spontaneous cure would be less than when the descending colon is the region involved.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE AND PATHOLOGY.

ALBERT N. BLODGETT, M. D., SECRETARY.

MAY 6, 1882. Meeting called to order at 8.10, DR. G. B. SHATTUCK in the chair.

DR. S. W. LANGMAID presented a paper upon

A CASE OF INTUSSUSCEPTION WITH RECOVERY.

DR. LYMAN asked the location of the tumor, the duration of symptoms, etc., in the case.

DR. LANGMAID replied that the tumor occupied the position of the descending colon, extending from above the crest of the ilium, and presented at the anus. There was moderate tenesmus. Between two visits the tumor entirely disappeared. Reduction of the invagination was at once succeeded by a desire to nurse. The tumor could be encircled by the finger, and with its central indentation was not unlike the neck of the uterus.

DR. A. N. BLODGETT asked the character of the fæcal discharges which followed the reduction of the intussusception.

DR. LANGMAID replied that they were perfectly normal, containing no blood or other unusual admixture. The bowels have since been regular.

DR. F. C. SHATTUCK remarked that in one of the recent English journals a case of invagination is reported which ended fatally in twelve hours. The disease was not suspected during life, but was discovered at the autopsy.

DR. LYMAN asked if there were any antecedent symptoms in this case.

DR. LANGMAID replied that there were none. The parents remembered that the child had appeared somewhat strangely, but it was doubtful if any reliable indications were present by which the disease could have been recognized. The child never went more than one day without a dejection. Its food was partially breast milk and partially artificial food.

F. S. BILLINGS, V. S., stated that invagination often occurs in the domestic animals, who thus afford desirable opportunities for studying the pathology and treatment of this affection. In the lower animals the symptoms are generally those of severe and continuous colic. The seat of intussusception in the horse and cow is generally the ileum, and may be relieved by opening that side of the abdomen and reducing the invagination. In dogs this operation is not accompanied by the same degree of danger as in the human subject, but is almost invariably followed by complete recovery. A case recently occurred which illustrated this fact. A dog had been sick for some days, with symptoms of invagination or impaction. At one point a firm, unyielding tumor was plainly felt through the abdominal parietes. The abdomen was opened, and the intestine at this point was found greatly distended and almost gangrenous in appearance. The bowel was opened by a longitudinal incision, and a large piece of coal was removed from its lumen. The accumulated fæces were removed, the parts carefully washed, and the bowel was again united by catgut sutures placed between the muscular layer and the mucous membrane. Perfect and uninterrupted recovery followed, and the dog is still alive.

---

[1] Archiv. für Gynäkol., xviii. 1.

[2] Read at the meeting of the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, May 6, 1882.

In another instance a cow was suffering from impaction of the rumen. The abdomen was opened, a large incision made into the distended viscus, and a great portion of its contents removed by means of a large basin. The rumen was closed by sutures, the external wound carefully united and bandaged, and the cow recovered. In dogs injections may sometimes be employed in cases of intussusception or impaction with the effect of relieving all the distressing symptoms. Injection fluid may be passed into the bowel of the dog until it flows from the mouth by vomiting. Cows are also often relieved from gastric or intestinal troubles by vomiting. A horse cannot vomit. In invagination all these animals present essentially the same symptoms as are observed in the human subject.

PLASTIC EXPERIMENTS IN THE ABDOMINAL CAVITY OF DOMESTIC ANIMALS.

Dr. Billings described a series of recent plastic experiments in the abdominal cavity of domestic animals, consisting of ovariotomy upon the bitch, and intestinal resection in the dog; as well as some casual observations upon similar operations in some of the other domestic animals. He said that in all operations of this kind made upon animals the first fact which impresses itself upon the operator is that the antiseptic system of surgery, so highly prized in human medicine, seems to be quite unnecessary. The ovaries may be removed from the bitch by abdominal section, or these organs in connection with the uterus; or the spleen; or resection of the intestines may be performed without any particular attention to antisepsis; the animals operated upon may frequently tear the external wounds open, they being all the time kept in not too cleanly kennels, or even in a horse stall, and yet we seldom see any signs of blood-poisoning or general disease. Bitches, from which the ovaries or uterus have been removed, in many cases, lose but one meal, which is to be attributed as much to the influence of chloroform as to the surgical interference. Dr. Billings always uses chloroform, and never yet lost a case from the anæsthetic. He has performed resection of the intestine in several cases, sometimes by simple transverse section of the gut, while at others he has removed several inches. He thinks it a mistake to give a purgative anticipatory to the operation, and prefers a light sloppy diet for a few days, with nothing to eat and little to drink for twenty-four hours antecedent to the operation. The intestine should be carefully washed out for some distance from both cut ends, with a one per cent. solution of carbolic acid. For experiment the ileum is to be preferred to any other part of the intestine, the walls being thicker. He prefers catgut sutures which have been soaked in carbolic oil a long time rather than silk; the sutures should, where possible, be passed between the muscularis and mucosa, as when they are exposed in the lumen of the gut, they either macerate more quickly or become digested. The edges of the wound should be brought into the closest possible apposition. Dr. Billings has also removed a segment from the walls of the stomach, of elongated oval form, in two instances, one of which entirely recovered; in the other the gastric juices seem to have *digested the sutures*, the wound opened, and the animal died after having got along well for two days. A simple milk diet should be commenced after twenty-four hours.

Two dogs, which perfectly recovered from resection of the intestine, were subsequently killed, and it was found that a circumscribed peritonitis visceralis had taken place, with thickening of the walls of the intestine for about two inches, the lumen of the gut being diminished to about half its normal size. Another striking fact in connection with operations upon the animal peritonæum is its resistance to such insults; diffuse peritonitis with effusion being almost unknown from any of the above operations. The serous inflammation is generally limited to the parts immediately adjacent to the wound.

Excessive fever has never followed in any of his cases, some two hundred, of ovariotomy in the bitch. The peritonæum of the horse is much less resistant to surgical interference than that of the dog and cow.

Dr. Morton Prince asked the symptoms of colic in the horse.

Dr. Billings replied that the horse stamps continually, lies down, sweats, and presents all the signs of great distress. Colic in the horse may be divided into (*a*) colic from indigestion, (*b*) colic from impaction, (*c*) wind colic. The last is the worst, and is often fatal. It may be relieved by puncture in the right iliac region, where there is generally a marked projection.

Dr. Hodges asked if Dr. Billings had ever seen peritonitis in dogs, to which **Dr. Billings** replied that he had seen it in one case, that of a female, in which the wound was found to have opened, with the intestine protruding, and there was a discharge of purulent fluid from the peritoneal cavity. In ten cases of the same operation there was only circumscribed peritonitis.

Dr. Hodges remarked that Claude Bernard had called attention to the toleration shown by the dog's peritonæum to surgical insults, during his celebrated labors in connection with the subject of gastric fistula.

Dr. Hodges asked if peritonitis attended rupture of the liver in the horse.

Dr. Billings replied that this accident was extremely rare and difficult of diagnosis. He had seen only one case, which was from a railway collision, and was followed by death in twenty hours.

In referring again to the subject of invagination, **Dr. Langmaid** mentioned a report in the *Journal of Medical Sciences*, according to which the bowel was partially resected in three instances in the human subject, twice on account of intestinal gangrene from impacted hernia, while the third was for an injury to the bowel inflicted during the operation.

Dr. Mixter said that two metres of the intestine have been removed for stricture of the canal, and that cases of this operation in which no adhesions existed uniformly recovered, while all those in which the operation was performed on account of gangrene in hernia were fatal.

DR. SHATTUCK asked if in the successful cases the cure was permanent.

DR. MIXTER replied that the original malignant disease recurred in each case in a few months.

DR. BUCKINGHAM asked the amount of contraction of the lumen of the bowel.

DR. MIXTER could not say.

DR. MORTON PRINCE read a paper on

PANCREATIC APOPLEXY,

with a report of two cases. The paper also contained a careful analysis of fourteen reported cases.

DR. GANNETT mentioned a case seen by himself at autopsy in which nearly the whole of the pancreas had been absorbed.

DR. BLODGETT noted that the reader had mentioned among the causes of hæmorrhage into the pancreas that of traumatic lesions of this organ, and asked Dr. Prince if cases were known to occur in which violence sufficient to materially affect the pancreas had been suffered without at once destroying the life of the patient.

DR. PRINCE was unable to answer the question, as he said the disease had never been diagnosticated during life.

DR. GANNETT spoke of a second series of cases by Zenker, not mentioned by the reader, which would considerably enlarge the number of reported cases of this lesion.

DR. HARLOW asked if the diagnosis of this lesion were not extremely difficult.

DR. PRINCE answered that it had never yet been made before the autopsy. After seeing one case it would seem that another case of the same kind might be recognized, but it must be very difficult. The most striking symptoms are profound collapse, sweating, pain, but no elevation of the temperature, and sudden and unaccountable death.

DR. G. B. SHATTUCK asked the effect of the intravenous injection of milk upon the patient mentioned in Dr. Prince's paper.

DR. PRINCE replied that for a time there was a marked amelioration of all the urgent symptoms, and the patient seemed decidedly better. This improvement was, however, transitory in its duration, and probably did not materially affect the fatal course of the disease.

DR. GANNETT said that a case is reported in the German journals in which Oppolzer is said to have diagnosticated this lesion before death.

DR. PRINCE replied that possibly Oppolzer had seen two cases, as Dr. Prince saw an account of one case in which this distinguished practitioner made no claim to having properly diagnosticated the nature of the disease during life.

DR. SHATTUCK alluded to the unavoidable absence of Mr. Bowditch, who had prepared an article upon The Sanitary Aspect of Nahant, Mass., and mentioned a visit he had lately made with Dr. Walcott, of the State Board of Health, to this place, together with the results of his examination of the system of drainage recently introduced, and referred to the interesting investigations which preceded and accompanied the present arrangement for the removal of sewage.

The announcement of subjects was also made for the next meeting, which will be the last one of the present season.

DR. T. A. DEBLOIS exhibited an

IMPROVED THROAT MIRROR,

which he described in the following words: —

"I desire to show to the Section a slight modification which I have made in throat mirrors. It is something which does not alone concern the specialist, for any one using the strong sunlight and a throat mirror can, by depressing the tongue, get a tolerable view of the larynx. This is particularly true in young children, where the high location of the parts makes it easy to get a glance at the instant when they cry or cough. This would often be quite sufficient to discover if the larynx contained membrane or was only reddened.

"A throat mirror would, perhaps, be more frequently employed by the physician were it not for the fact that when in a fixed handle, with the glass almost at a right angle to the stem, it forms an inconvenient object in the pocket. To obviate this I have hinged the mirror at its junction with the stem so that it may be straightened in prolongation of it, and as it has no affixed handle may be easily carried in the vest pocket. When required for use, all that is necessary is to replace the mirror at the usual angle (one hundred and twenty degrees) and push the slide down over the joint, then withdrawing the lead from your pocket pencil you replace it by the stem of the mirror, and thus have a perfectly serviceable instrument which may be carried in the vest pocket."

Adjourned at 9.30 P. M.

◆

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

LEPROSY AND ITS RELATIONS TO SYPHILIS.

THE last meeting of the Society before the summer vacation was held June 26th, when **DR. H. G. PIFFARD** presented a case of leprosy, and made some remarks upon the relations of this disease to syphilis. In introducing the subject he said that a year ago he had presented another case at the County Medical Society, and, as he had at that time spoken pretty fully of the general features of leprosy and of its treatment, he would not on the present occasion go over the same ground, but would devote himself principally to the consideration of some statements in regard to the disease recently made by Dr. Fitch, of Honolulu, and of some inquiries put by Dr. Emerson, also of the Sandwich Islands, concerning the subject; and would, in conclusion, direct attention to the increasing frequency of leprosy in this country. Dr. Piffard then introduced the patient, who was a native of Japan, about thirty-five years of age, and who had come under his care in the wards of Charity Hospital on the 20th of May, 1882. He spoke no English, German, or French, and the history which had been obtained from him through an interpreter was very imperfect. So far as could be made out, however, there was no family taint, and he denied syphilis, saying that he had not had sexual intercourse for ten years. He pursued the occupation of a farmer in Japan, where he remained until two years ago. It was only six weeks before his admission to the hospital that he fell sick, and spots appeared upon his arms, legs, and trunk. These, he said, came out gradually, which was not the general rule in leprosy. For two weeks he remained in the New York Hospital, where he was treated for leprosy, although he himself thought that he had syphilis. Dr. Piffard saw him (at Charity Hospital) for the first time on May 21st, and at that date, he said, the diagnosis was by no means certain, as he was unable to determine whether the man was suffering from syphilis or leprosy, or from both together. There might be similar eruptions and the involvement of the inguinal and other glands in the two diseases. In countries where leprosy was frequently met with, such as China and the Sandwich Islands, it was sometimes very difficult to say which disease was present. In the case now exhibited there was still some leprosic infiltration about the neck, but this condition had to a great extent disappeared under the local treatment which had been adopted.

Dr. Piffard went on to say that about six weeks ago he had received a letter from Dr. N. B. Emerson, formerly of New York, but now of the Sandwich Islands, which was accompanied by the report of the Board of Health of those islands, containing a report by Dr. Emerson and an article by Dr. Fitch, of Honolulu, in which the latter endeavored to prove that leprosy was in reality nothing more or less than the fourth stage of syphilis. In his letter Dr. Emerson said that he did not think that all the statements of Dr. Fitch should be received with implicit confidence, as, in the first place, he had no knowledge of the Hawaiian language, and, in the second, he had an incorrect idea of syphilis, making no distinction whatever between hard and soft chancres. Personally he had not been able to study leprosy microscopically and post mortem, as autopsies were not at all favored in the Islands; but he was perfectly familiar with the language of the natives (having been born himself in the Sandwich Islands), and as he had been in charge of a leper colony for some years, he had had abundant opportunity for investigating the disease clinically.

Dr. Emerson then went on to put a number of interrogatories, suggested by the propositions advanced by Dr. Fitch, which were somewhat as follows: (1.) Leprosy is the fourth stage of syphilis; a stage which white men, as a rule, escape by reason of hereditary immunity. The whites, being already syphilized through their ancestry, do not suffer from this fourth stage; but where syphilis attacks a virgin race the disease is exceedingly apt to run on to the fourth stage. During the last forty years there have been less than twenty cases of leprosy among the white population in the Sandwich Islands, although it has been very common among the natives. Syphilis was introduced into the Islands a hundred years ago; but a number of years was required before this fourth stage could become developed. In the second place, Dr. Fitch defied any one to produce a case of leprosy in which syphilis, either hereditary or acquired, was not antecedent. In ninety cases which he saw in the hospital there was only one instance in which there was any doubt whatever in regard to there being a clear syphilitic history. Thirdly, in a large number of cases seen in his dispensary practice it was utterly impossible to say whether the patient were suffering from syphilis or leprosy. In the fourth place, he claimed that the only treatment that did good in syphilis was of service in leprosy, and *vice versâ*. Fifth. Both were alike incurable, and both alike amenable to treatment. Sixth. The children of lepers inherited the disease, as was the case in syphilis. Seventh. All were agreed that a person affected with syphilis offered an excellent field for leprosy. Dr. Piffard then remarked that the late Professor Börck, of Christiania, who was the highest authority on the subject of leprosy, found in his experiments with inoculation that there was nothing in the one disease to prevent a person suffering with it from taking the other.

Returning to Dr. Emerson's letter, he took up the questions of the latter in detail as follows: (1.) "Do you find any cases of leprosy without a leprous intimacy?" In reply to this Dr. Piffard said that the disease was not contagious by simple contact, but probably by means of the blood or secretions. There was very little doubt that leprosy had been propagated by vaccination, by sexual intercourse, and by heredity. During the past twenty years there had been a good many lepers in New York, and he had yet to find a single case of the disease developed in the city in a native. Indeed, he knew of only two cases of leprosy which remained in New York for any length of time. Both had been born in leprous countries, the one in Mexico and the other in Japan, and the latter was the one now before the Society. There had been one case in the practice of the late Dr. H. D. Bulkley (pronounced a genuine case of leprosy by Professor Börck when he was in this country), which had apparently originated without leprous contact; and this was the only case of the kind with which he was acquainted. (2.) "Do you find lepers without a previous history of syphilis?" In answer to this Dr. Piffard said that in the majority of cases which he had seen, the patients being from all parts of the world, there was no clear history of syphilis. In all that could speak English, French, or German there was certainly no such history, as far as could be made out. (3.) "Do you find cases of leprosy occurring in patients previously syphilitic under such circumstances as to lead you to believe that the leprosy comes from the syphilis?" This was answered in the negative. (4.) "Do you find any facts that lead you to suppose that a case of syphilis ever changes into one of leprosy?" Also answered in the negative. (5.) "Does not the pathology (microscopic) of leprosy differ widely from that of syphilis?" After speaking of the pathological characteristics of leprosy as different from those of syphilis, Dr. Piffard said that the distinctive feature of the former was found in connection with the cord and the nerves going to the extremities; there being at first a marked proliferation of connective tissue, and afterwards a shrinkage or sclerosis, which rendered the nerve smaller. In the present instance the ulnar nerve could be distinctly felt in its course along the arm like a thick, hard cord. In syphilis there was very rarely, if ever, any organization of new fibrous tissue. Dr. Fitch was, therefore, unquestionably wrong in his opinions. He had no doubt had a large experience with leprosy, but perhaps not a sufficient experience with syphilis pure and simple.

Another point that we should think of in connection with leprosy, Dr. Piffard continued, was that as our intercourse with foreign nations increased leprosy would in all probability increase in this country. As it was a disease which always spread when it made its appearance, it was very important, he thought, that lepers should be isolated. He had seen as many cases of leprosy in Europeans, he said in conclusion, as in those born in countries where the disease was indigenous.

The subject being open for discussion, DR. A. JACOBI asked why we should insist on isolation if we did not believe the disease was contagious? During the fourteenth and fifteenth centuries all Europe was full not only of lepers but of hospitals for lepers.

DR. **PIFFARD** said, in reply, that we did know that where any lepers settled down leprosy spread, just as in syphilis the disease was propagated from one person to another. If syphilitics were isolated we should undoubtedly have less syphilis.

DR. **JACOBI** then remarked that as a number of emigrants with the disease were known to be in the country, and yet it had not spread, he could not see the necessity of isolating the cases. Dr. Piffard himself had said that he knew of only one person in the United States who had acquired the disease here. All the others came from other countries where leprosy was indigenous.

DR. **RAMSON** said that as long ago as 1828 he saw a case of leprosy, and since then he had had an occasional opportunity of observing others, but he had never heard of any one contracting the disease from any of these patients. In most of those which he remembered there was decidedly more of a scaly appearance about the leprous sores than in the case now presented.

The secretary read for DR. JAMES H. LOW extracts from a report of a case of lepra which the latter had recently published in the *Southern Medical Record.* The patient was a female, and a native of England, sixty-eight years of age, and had lived in the United States for thirty years. It was, he believed, a case of *lepra nigratans.* The scaly appearance of the lesions was a marked feature of the case, and the patient at one time became very despondent, thinking her case incurable. A variety of remedies were employed, including arsenic and iodide of potassium, which seemed to be of some service. As the disease commenced in the lower extremities, the doctor thought it advisable to exclude the air from the limbs, and accordingly applied starch bandages, apparently with marked benefit. In the latter part of the treatment an attack of erysipelas set in, but it fortunately did not last long. Alcohol internally and the application of grease externally seemed to aggravate the disease, which eventually was practically cured.

In answer to an inquiry from one of the members as to whether he had known leprosy to appear before the age of puberty, DR. **PIFFARD** stated that the first case that he ever saw, which was in 1864, commenced when the patient was nine or ten years old. In this instance the disease was transmitted by means of vaccine virus taken from a leprous subject. He would take this opportunity also to explain that there had always been a certain amount of trouble about the nomenclature of leprosy. The Greek writers mentioned two distinct diseases which had often been confounded with each other under the general name of leprosy. The affection which they designated as lepra was undoubtedly the psoriasis of the present day, while that which they called elephantiasis was the modern leprosy. The modern English writers had confused matters very much, however, by calling the latter *lepra vulgaris.* The two diseases were distinctly differentiated by Herodotus and other old writers. In the translation of the Bible the disease called leprosy in the Old Testament was an entirely different one from that so designated in the New. In the Old Testament the symptomatology of the affection, whose name was translated as leprosy, was clearly that of elephantiasis, while in the New the disease mentioned as leprosy was undoubtedly the lepra of the Greek writers or the modern psoriasis. The case of Dr. Low, just cited, as well as those mentioned by Dr. Ramson, in which the scaly appearance was a marked feature, were in all probability instances of psoriasis, and not of leprosy. There was also a difference in the two diseases as regards their duration, for while the average duration of leprosy was nine or ten years, psoriasis did not appear to shorten life to any appreciable extent.

The president of the Society, DR. **STURGIS**, said that he would like to call attention to a few points in the differential diagnosis of leprosy and syphilis. In the first place, however, he would remark that the two diseases had many characteristics in common. Thus, leprosy, like syphilis, attacked all the tissues of the body. In the case of a Norwegian leper, which had been sent from the Sailors' Snug Harbor, on Staten Island, the patient presented tubercular lesions and gummous iritis, and, with the exception of the initial lesion, there was found to be, in general, a resemblance of the gross appearances in the two diseases. As to the points of difference, for one thing, the maccules were dissimilar in the two affections. In leprosy the maccules did not appear as single spots, but in broad plaques, and their outbreak was usually preceded by severe febrile symptoms. In one instance Dr. Sturgis had seen the temperature run up to 105° F. The patient was placed upon quinine, and the fever gradually disappeared. When, on the first of June, he had succeeded Dr. Piffard in the service at Charity Hospital, he had found that the patient now before the Society was suffering in the same way, but the febrile symptoms were soon broken up by the use of strychnia. The maccules of leprosy also differed from those of syphilis in their location, appearing principally upon the chest, arms, and legs. Dr. Piffard had already alluded to the peculiar affection of the nerves in leprosy, and had pointed out the condition of the ulnar nerve in the present instance. This was a characteristic feature of the disease. In syphilis the tubercular stage made its appearance very late, if, indeed, it ever did so, but this was not the case with leprosy. Thickening of the fibrous cartilage of the nose and other parts was frequently met with in leprosy, but not in syphilis, and among the other distinguishing characteristics of leprosy was anæsthesia and swelling of the extremities. Dry necrosis also sometimes occurred in the hands and feet, so that the fingers and toes actually crumbled away and dropped off.

Isolation was desirable in this country, Dr. Sturgis thought, not so much for the purpose of preventing contagion as on account of the leprous patients themselves. In the Sandwich Islands, however, it was really necessary as a protection to the community.

If scales were present in any supposed case of leprosy he would regard it as very suspicious, as the diagnosis of leprosy would probably be found to be a mistaken one. As to the treatment of leprosy, mercury, iodide of potassium, arsenic, etc., had been faithfully tried, but their results had been entirely negative. Of late years, however, some of the English surgeons in the East had employed chaulmoogra oil externally with considerable success, and he had himself used it with decided benefit. In the first case in which he saw it tried it had undoubtedly prolonged the patient's life. Another remedy that was recommended as a cure by the English surgeons was hoang-nan, a drug containing an active principle which seemed to be very much of the nature of strychnia. In the case that Dr. Piffard had presented to the Society this evening (which had come under Dr. Sturgis's care on the 1st of June), he had employed strychnia internally and the chaulmoogra oil externally, and there had been a marked improvement in the patient's condition under this treatment. Still he was free to confess that his experience with it had not as yet been as favorable as that reported by some of the English surgeons.

In bringing the discussion to a close, **Dr. Piffard** quoted some statements from Dr. Emerson's report to show the danger of propagation in leprosy, and said that the disease was exceedingly apt to appear in groups; to which **Dr. Jacobi** briefly replied that there were plenty of affections, such as influenza, malaria, etc., which occurred in groups (a considerable number of the same family often being attacked at one time), and yet they were not contagious, and no one would think of isolating those suffering from them.

◆

RHODE ISLAND MEDICAL SOCIETY.

The seventy-first annual meeting of the Rhode Island Medical Society was held in Providence on Thursday, June 15th, the president, **Charles O'Leary**, M. D., in the chair.

Eighty-five Fellows were present. The Society now numbers one hundred and seventy-nine active and seventeen honorary members. Dr. George Capron, of Providence, who joined the Society in 1823, is the Senior Fellow.

The annual report of the treasurer, **Dr. C. H. Leonard**, exhibited a balance of $322.71. The printing fund amounted to $840.56. It was voted to add to the latter fund two hundred dollars of the surplus in the treasury.

The trustees of the Fiske Fund reported that the deposit subject to their order now amounts to $1933.13. No prize is awarded this year. The following are the subjects proposed for 1883: —

(1.) Neuralgia. Its cause, pathology, and treatment, with special reference to nerve-stretching and nerve-section as a method of cure.

(2.) Is the general disuse of blood-letting in accordance with sound physiological principles as applied to the treatment of disease?

(3.) Hip-joint disease. Its most successful treatment, as determined by experience.

For the best essay, considered worthy of a prize, on either of the subjects proposed for 1883, the trustees offer a premium of two hundred dollars.

Dr. H. G. Miller, chairman of the publishing committee, reported that the committee have edited Part 5 of vol. ii. of the Transactions of the Society, covering the four meetings held during the year 1881. The report sets forth the pressing need of a larger printing fund as a secure basis for issuing promptly the annual Transactions.

The committee on the library reported through their chairman, Dr. T. Newell, that the library is of increasing value to Fellows of the Society and is in constant use. Five hundred and one titles have been added during the year; the collection now numbering two thousand and ninety-four volumes, exclusive of pamphlets. The committee have accumulated a considerable number of duplicate medical journals, and invite correspondence with other libraries in reference to exchanges. Dr. George D. Hersey, of Providence, is librarian. The report announces an addition of five hundred dollars to the building fund, the generous gift of Mrs. Elizabeth A. Shepard.

The following amendment to the By-Laws was adopted: —

Every candidate for fellowship in the Rhode Island Medical Society shall hereafter be required to pass a strict personal examination before the Board of Censors on those branches of medical science taught in recognized medical colleges, to give satisfactory evidence that he has an adequate knowledge of the Latin language, and has received a good general English education, and that he does not profess or intend to practice any exclusive system of medicine. If such examination be satisfactory to a majority of the censors present, the Board of Censors, in compliance with Section 4, Chapter III. of the By-Laws, shall recommend the candidate for fellowship.

Officers for 1882–3 were elected as follows: —

President, Job Kenyon, M. D.; Vice-Presidents, Drs. O. C. Wiggin, and H. G. Miller; Secretary, George D. Hersey, M. D.; Corresponding Secretary, Edward M. Harris, M. D.; Treasurer, Charles H. Leonard, M. D. Board of Censors, Drs. Benjamin Greene, Ariel Ballou, Otis Bullock, J. H. Eldredge, J. W. C. Ely, G. P. Baker, Lloyd Morton, S. S. Keene. Publishing Committee, Drs. H. G. Miller, G. W. Porter, R. F. Noyes. Committee on the Library, Drs. T. Newell, H. G. Miller, G. D. Hersey, O. C. Wiggin, G. W. Porter.

As recommended by the Board of Censors the following were elected new members: Drs. Henry Kirby Gardiner, Albert Mason Knapp, and George Galen Wheeler, of Providence, and Neal O'Donnell Parks, of Ashton.

The President introduced and welcomed as Delegates Dr. Marcus Ide of the Vermont Medical Society, Dr. Joseph Steadman of the Massachusetts Medical Society, and Dr. William Deming of the Connecticut Medical Society. Each of the visiting gentlemen responded gracefully.

Dr. Horatio R. Storer, of Newport, sent a note regretting his inability to attend.

Dr. A. G. Browning read the report of the delegates to the annual meeting of the Connecticut Medical Society.

Dr. D. H. Batchelder presented to the Society's library several medical books of interesting historical associations. A copy of the third edition of Huxham's Essay on Fevers, London, 1757, contains the autograph of Prof. William Cullen, of Edinburgh; and a copy of White's Lying-in Women, Worcester, 1793, bears the signature of Matthew Thornton, of New Hampshire, one of the signers of the Declaration of Independence.

At one P. M., the annual address was delivered by Charles W. Parsons, M. D., of Providence. The discourse was an elaborate retrospect of the seventy years which have elapsed since the organization of the Society in 1812, and included biographical sketches of several early presidents of the Society.

Dr. Samuel W. Francis, of Newport, was appointed anniversary chairman for the annual meeting in 1883.

Following adjournment, the Society dined at the Café St. George, Dr. J. W. C. Ely acting as toastmaster.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY M. H. RICHARDSON, M. D., SECRETARY.

PAPILLOMA OF THE VOCAL CORDS.

DECEMBER 5, 1881. **DR. F. H. HOOPER** reported a case of papilloma of the vocal cords, and showed ten excellent drawings made by Dr. Quincy representing the glottis before and after operation. The patient was a man fifty-four years old. His voice began to fail a month previous to his first vist to the hospital. The hoarseness gradually increased, and for a week he had not been able to speak above a whisper. Examination with the laryngoscope showed a warty growth, sessile, occupying the anterior angle of the vocal cords and extending along the superior surface and edge of the right vocal cord, involving about one third of its surface. The patient was first seen November 3d. On November 25th he was operated upon, and at one sitting the growth was almost entirely removed with Mackenzie's forceps. The cord was afterwards cauterized with nitrate of silver in substance. The voice is now quite good, and although not restored as yet to its normal tone, another operation will probably not be necessary. Dr. Hooper also reported a case of chronic follicular tonsillitis in which a papilloma about the size of a bean was attached to the right tonsil. A drawing of the disease and the excised tonsil were shown.

DR. LANGMAID said that he had recently removed from the tonsil a tumor like that shown by Dr. Hooper. It was somewhat larger, with a long pedicle, and was attached at the very upper edge of the tonsil, so that it was difficult to get at its attachment.

DR. KNIGHT said that in regard to the first case reported by Dr. Hooper, that it was the largest tumor of the kind he had ever seen, being more than one half an inch long. The voice, though not entirely corrected after the operation, was wonderfully improved. Considering that the growth was so sessile and so extensive, it was very remarkable that the operation should have been so thoroughly accomplished.

PROTRACTED MENSTRUATION.

DR. WELLS spoke of a remarkable case in which menstruation was present in a colored woman at the age of eighty. The authenticity of the case seemed good, it being described by a very intelligent daughter. Writers throw discredit on these cases of menstruation occurring in aged persons, yet it does not seem any more remarkable than the occurrence of this function at a very early period in life. Dr. Wells did not believe that an affection of the uterus could account for a regular discharge exactly simulating normal menstruation such as was seen in the woman of eighty.

Six or seven years ago he saw a child of about six years who had a periodic discharge from the vagina which continued two or three years. This was certainly very remarkable. Similar cases have been reported from time to time which have been undisputed. If we accept as true these cases of very early menstruation, its protraction, even to the extreme old age of the case spoken of, ought not to be so very improbable.

TRACHEAL TUMORS RESULTING FROM TRACHEOTOMY.

DR. LANGMAID read the regular paper on this subject, which was based upon the case of a child of four years who swallowed half a dried chestnut. Severe paroxysms of cough with almost complete asphyxia followed. Tracheotomy was performed. A slight bronchitis complicated the convalescence, which was otherwise uninterrupted; the voice, however, continued to remain a hoarse whisper, and respiration was impeded on rapid motion.

On examination since the operation with the laryngoscope a grayish-white tumor, in the region of the cricoid, was seen occupying one third of the diameter of the trachea, probably a granulation mass springing from the internal surface of the wound at its superior angle. The symptoms of its presence were dyspnœa, not marked during the day except upon exertion, but more or less constant at night, when the breathing was dreadfully noisy; poor appetite and loss of flesh; occasional cough and hoarse voice.

At the end of four months the tumor had grown much smaller and only a sessile button remained. The dyspnœa was so much relieved that no operative interference was necessary. Was seen three days previous to report, had no longer any trouble unless she takes cold, when at night the breathing was as formerly very noisy.

The history of this case shows that the tumor was the direct result of tracheotomy, and that its partial disappearance was spontaneous. Such tumors are now known to be not infrequent as the result of tracheotomy. They arise as granulations from the wound, more often from its superior angle, and protruding into the trachea impede respiration in proportion to their size. They may be detached and thrown out during attempts to remove the tube, or, if the tube has been removed soon after the tracheotomy, they may manifest their presence by the dyspnœa resulting from stenosis of the trachea, or they may even produce asphyxia and death.

Search for tumors ought to be made by exploration through the tracheotomy wound in all cases in which it is found that the tube cannot be removed, and the growths, if they exist, should be removed by forceps, and an escharotic applied to the base. If the wound has healed, the cause of the suffocative attacks can be ascertained only by the larnygoscope; though if the dyspnœa is almost continuous, is increased by exertion, and is greater at night than during the day, the presumption is in favor of the existence of a tumor. When the wound is cicatrized, one of two courses of treatment must be followed; the reopening of the tracheal wound, or the destruction of the tumors through the mouth. The latter is so difficult that it is not likely to be frequently done.

DR. KNIGHT said that Schiller in his monograph had collected, besides Cox's cases, six from Moncton, and about six others, making thirty or forty in all, of which seven were fatal. He makes no important suggestions with regard to the treatment of these cases except to extend the cut and destroy the growth with the Galvano-cautery.

DR. GAY said that the importance of this subject is well illustrated by a case now at the City Hospital in which tracheotomy was performed by Dr. Ingalls, for croup or diphtheria. It is now five or six months since the operation, but the child wears the tube part or all the time. The wound has been enlarged several times, and efforts have been made to clear out the trachea, but so far with little success. With the exception of this case, the longest time a tube has been left in the trachea has been twenty-seven days, the shortest five. The custom now is to attempt the removal of the tube at about the fifth day. But in the majority of cases this cannot be done successfully. The last tracheotomy was done about twelve days ago; and yesterday the tube was permanently removed, an unsuccessful attempt having been made a few days before. Dr. Gay thought that the tube should be removed as early as possible.

Dr. Porter referred to a case which occurred some years ago that might have been explained by the presence of tracheal granulations. Tracheotomy had been done for diphtheria, and attempts had been made to remove the tube many times in vain. The child was finally brought to the hospital, where a permanent removal of the tube was made, after the child had worn it more than a year. The question is whether there might not have been a granulation tumor in this case.

Dr. Sabine said that last spring he saw a child, eighteen months of age, upon whom tracheotomy had been performed two months before. The child had worn the tube three or four weeks when it was removed. A few days after the wound had become healed the child began to have dyspnœa, which was evidently laryngeal, although in so young a child he was not able to make an examination by the laryngoscope. He thought at the time that the dyspnœa was due to the presence of granulations. In the course of ten days or a fortnight the trouble subsided, and it has never returned.

Dr. Langmaid said Carrier relates one case in which the tumor was on the œsophageal side of the trachea, opposite the opening made by tracheotomy. It was a round, button-like body, having longitudinal markings. Dr. Langmaid had made measurements of the tracheas of children with regard to the proper size of the tube and its mechanical effect thereupon. He found that by putting in a certain size of tube the posterior extremities of the tracheal rings were brought together on the back side, so that a swelling or tumor was made on the back side of the trachea, corresponding to the attachment of the œsophagus. This tumor was marked by longitudinal folds, caused by the tube being too large for the trachea. The mere presence of a tube high up towards the larynx may cause a disturbance to the laryngeal nerves, by which paralysis may occur. Such a case was in the hospital, and a diagnosis of paralysis of the abductors of the larynx was made. Having eliminated paralysis and spasm of the glottis, there remains nothing to prevent the removal of the tube except granulation tumors.

Dr. Knight remarked that Schiller claims that granulations may start at the point of incision or in other parts of the trachea, especially the seats of diphtheritic ulceration.

In answer to Dr. Hooper, **Dr. Langmaid** said that these cases may occur in the adult.

In answer to a question as to favorite form of tube with him, **Dr. Porter** replied that he had received a tube from London, composed of two side pieces or flanges of the ordinary shape and size, which can be pressed together, and thus easily be made to slip through the tracheal incision. Into this is introduced a second tube. It was found impossible to use them. He preferred to use the fenestrated tube, so that a cork can be put into the orifice. He has never used the rubber tubes because their calibre is very small in proportion to their size, as compared with the silver ones. The great danger with the silver tubes with a movable collar is that it may get loose, and the tube drop into the trachea. He had once been obliged to use a gum elastic catheter, no regular tracheotomy tube being small enough.

Dr. McCollom mentioned the case of a boy with paralysis of the posterior crico-arytenoid muscles, who, after wearing a rubber tube for six or eight months, in a fit of coughing separated the tube from the collar. The tube was removed from the trachea with considerable difficulty.

Dr. Gay asked the experience of members in the use of the so-called Arthur Durham tubes. Their peculiarity is that by means of a sliding collar the depth of the tube in the neck can be regulated. Dr. Gay's favorite tube is one with a movable collar. He is careful to see that it is sound and well made. It is easy and comfortable, and accommodates itself to the movements of the larynx and trachea without undue irritation. He does n't like to use a tube with an immovable collar, especially in children, for it seemed to him that it must irritate the trachea if fastened firmly enough to stay in place. He had had no experience with rubber tubes.

Recent Literature.

Diseases of the Skin. By Louis A. Duhring, M. D. Third Edition. Philadelphia: J. B. Lippincott & Co. 1882.

Appearing soon after the second edition, which was issued in January, 1881, the third edition does not present any marked differences from its predecessor. The principal change is the rearrangement of the chapter upon the anatomy and physiology of the skin, to which about ten pages have been added. By various small insertions and alterations throughout the book, its size has been increased by about forty pages. One change has been made in classification. Molluscum sebaceum is removed from the place among the disorders of secretion, which it occupied in the second edition, and, under the name of molluscum epitheliale, is put among the hypertrophies of epithelium; this upon the authority mainly of Virchow and Thin. An odd omission in the second as well as in the third editions is that of erysipelas, the existence of which is entirely ignored, save where once or twice it is mentioned in connection with differential diagnosis. No notice is taken of the discovery of a bacillus in connection with the pathogenesis of leprosy. The book is easily first among American and English works on dermatology.

— The history of medical advertisements is yet to be written. We have recently been shown an important contribution to such a history in the shape of a self-laudatory proclamation of an individual who describes himself as "recently from his medical establishment in Boston," in which this "justly renowned physician and surgeon" enumerates various diseases in which he has met with "astonishing success," and proceeds, "Uterine diseases, both in the male and female, cured by a prompt and safe course involving no unnecessary delay, and but slight expense."

Medical and Surgical Journal

THURSDAY, JULY 13, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE SUCCESSION TO THE PROFESSORSHIP OF SURGERY IN HARVARD UNIVERSITY.

THE President and Fellows of Harvard University have nominated David W. Cheever, M. D., to the Professorship of Surgery in the Harvard Medical School, rendered vacant by the resignation of Dr. Henry J. Bigelow, which was lately noticed in these columns.

Such a nomination becomes an appointment only after being favorably acted on by the Board of Overseers. Not wishing to forestall the action of the Overseers, in regard to which, however, there can hardly be any reasonable doubt, we have hitherto abstained from calling attention to Dr. Cheever's nomination. Some of our contemporaries, however, having seen fit to notice it, and the next meeting of the Overseers being somewhat distant, the JOURNAL can scarcely do less than say a few words to its readers in regard to so important an appointment.

Since the foundation of the Harvard Medical School the Chair of Surgery has had comparatively few occupants. The first was Dr. John Warren, who was succeeded by his son, Dr. John C. Warren, these gentlemen holding at the same time the professorship of anatomy. Dr. George Hayward was the next professor, and he was followed by Dr. Bigelow, who has just closed his service of thirty-three years. The average length of service of each of the four professors of surgery would therefore be about twenty-five years. We wish the fifth professor at least an equally long and prosperous tenure of the Chair of Surgery as his predecessors.

Dr. Cheever graduated at Harvard College in 1852, and at the Harvard Medical School in 1858. After a course of study abroad he settled in Boston, and soon became connected with the Medical School as a teacher. He was for some years demonstrator of anatomy, and subsequently assistant professor in that department. Many of his former pupils will remember with pleasure his instruction in that branch of medical study, and especially in regional anatomy. His last position was professor of clinical surgery, having previously, we believe, held the title of assistant professor of surgery. Dr. Cheever's lectures on clinical surgery, delivered originally at the Boston City Hospital, were very popular. With this Hospital he has been connected as a surgeon since its inception, eighteen years ago.

Surgical teaching would not be likely to lose its interest in his hands, and we allow ourselves to hope that the first application of ether in serious operations and the development of litholapaxy, to say nothing of many other carefully progressive steps, will prove a suitable source of emulation to whoever may hold this professorship. The surgical world at large knows Dr. Cheever best, at present, by his monograph on Œsophagotomy, and by his contributions to the Boston City Hospital Reports, the last volume of which was published some weeks since.

As a former editor of this JOURNAL we shall extend to Dr. Cheever, at the proper time, our hearty congratulations. It is always with a feeling of peculiar sympathy and satisfaction that the JOURNAL sees its former editors called to occupy positions of honor and responsibility.

THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

BOSTON, with its well equipped hospitals and their able corps of surgeons, is well abreast of the advancing tidal wave of modern surgery, and is entitled to rank as one of the surgical centres of this country. This position has been gained by the ability, industry, and achievements of men whose names are already part of surgical history, and whose teachings are accepted in every land.

There is much more, however, that can yet be done, and in which every surgeon should bear his part. The amount of material furnished by our hospitals is small as compared with that of many cities, but is large enough to afford opportunity for safe generalization from careful observations, and is much larger than has yet been thoroughly utilized for either public or private benefit. It is in this respect that we hope for advance.

Good work has been done of late by the City Hospital staff, as seen in the published records, but there should be some means of collating and recording the joint experience and observation of every one engaged in surgical practice.

This, it seems to us, could be best done through a surgical society, provided that sufficient interest was felt to call forth carefully prepared papers, and to evoke free discussion and criticism. The collation of careful observation and accurate statistics on any given subject might be well done by such a society, and its preserved and published records might become a valuable contribution to surgical literature. The value of this method of combined observation has not as yet *begun* to be appreciated, and we believe it destined to reveal to us many now unthought of truths. It is work to which enthusiasm must be brought, combined with a willingness to do patient and apparently unproductive drudgery for the sake of the final result.

Such a society may the Surgical Section of the Suflkfo District Medical Society become, if our surgeons will continue to manifest the interest already shown the past winter. This section, although in existence for many years, never met until the past winter, when meetings have been held every six weeks, with a gradually increasing interest and attendance. A marked point has been the freedom of discussion.

Papers have been presented by Drs. Bigelow, Bradford, Cabot, Cheever, Dwight, Elliot, Gay, Greenough, Homans, Lyman, Richardson, Thorndike, Warren, Much of the success of the Sections, which now seems assured, is due to the energy and ability of its chairman and secretary, whom we hope may long continue to occupy the position they so ably fill.

This is a society which interferes with no other existing one, and merits the hearty coöperation of all our surgeons, which we earnestly hope it may receive, and with which it may do work which will reflect credit on the profession.

SURGEON-GENERAL CRANE.

SURGEON-GENERAL BARNES, in accordance with the provisions of the bill making obligatory the retirement of army officers reaching the age of sixty-four, has retired from the duties of the office so long familiar to him.

The President has nominated to fill the vacancy thus created Col. Charles H. Crane, Assistant Surgeon-General since 1863. Dr. Crane is fifty-seven years of age, was born in Rhode Island, is a graduate of the Harvard Medical School of the year 1847. His appointment as Assistant Surgeon dates from February, 1848. He was first sent to Mexico, and was thence transferred to Florida, where he saw service in the Seminole war. At the outbreak of the Rebellion he was on duty in New York. In 1861 he became Medical Director of the Department of the South, and was continued in that duty until the fall of 1863, when he was placed on duty in the Surgeon-General's office at Washington. At the close of the war he was given the position of Assistant Surgeon-General, which he held until the time of his promotion.

According to one of our daily contemporaries "he is entirely familiar with the duties of his new office, for which he is peculiarly fitted by temperament as well as training. His written orders have always been considered as models of clearness and precision; and his appointment in all respects is in accordance with the best principles both of civil service and military practice."

During the late war he was brought into close connection with many Massachusetts surgeons who will see his promotion with pleasure, both on account of his high professional character and his fitness for the office. We believe his appointment will be pleasing to those medical gentlemen who must serve under him, no matter what their previous wishes may have been in regard to the office.

THE APPROPRIATION FOR THE NATIONAL BOARD OF HEALTH.

THE annual appropriation for the National Board of Health was cut down in the Senate to such a small sum that, if passed by the House of Representatives assent to it, the present activity of the Board will be seriously interfered with, and several of its undertakings abandoned.

The Board will find it necessary first of all to stop the publication of its weekly bulletin, and with this the prosecution of its investigations into the causes of prevalence and means of prevention of such diseases as yellow fever, malaria, and small-pox. The different numbers of the *Bulletin* are of very unequal value, but some of them have contained good material, and have no doubt been of considerable service in throwing light on sanitary problems. The report on the results of an examination of several sewerage works in Europe, the report on the inspection of various vaccine farms in different States, the study of malaria, are instances of work, past and present, by the Board in connection with the *Bulletin*, which already, or soon, will represent more than a fair return for money expended.

With the small appropriation proposed all attempts at quarantine work by the Board must be abandoned. It is well known that yellow fever is again rife in the Havana, in Vera Cruz, and other ports, and but a few days ago several cases arrived in a vessel here in Boston.

We are well aware that in certain quarters it is thought desirable that all quarantine matters should be left strictly in the hands of local officers. It is also true that an appropriation is not easily obtained unless a certain return may be anticipated in the form of political backing. This is a disadvantage which the National Board of Health labors under which is not shared by many less worthy objects, as the River and Harbor Bill attests.

Unless during the panic of an epidemic the average voter sees wealth more easily in a good job than in a high standard of health.

MEDICAL NOTES.

— The necrology of both Harvard and Yale this year is of interest as showing the tendency to longevity among educated men, according to an exchange. Of the seventy-eight dead in the Yale list for the year, thirty-one were seventy years or over, the average being over seventy-eight. Of the seventy-one dead in the Harvard list, twenty-nine were over seventy, the average being over seventy-seven years. In each list the extreme age reached was ninety-six years.

NEW YORK.

— The first excursion of the season of the Floating Hospital of St. John's Guild for the benefit of sick children took place on the 6th of July, the trip being down the bay to the sea-side nursery of the Guild at Cedar Grove, about half a mile below New Dorp, Staten Island. These excursions will be continued every Tuesday, Thursday, and Saturday during the summer, and on the alternate days of the week mothers can secure the admission of their sick children to the nursery by making application to the examining physician of the Guild, Dr. David Phillips, at the office of the society. Last year 35,000 excursion tickets were given out, and the average number of mothers and children on each trip was from 900 to

1000. Since 1875, when the scheme originated, 252 excursions have been given, and 197,120 poor women and children taken upon them. On these excursions milk and other appropriate food are served out to the children at ten A. M. and three P. M., and at noon their mothers are given a substantial meal. The managers of the Guild are desirous of completing the nursery on Staten Island, by the addition of a wing that is still wanting, as soon as the five thousand dollars necessary for the purpose can be raised by subscription or otherwise. This will afford space for eighty additional beds.

— At the last session of the Board of Estimate and Apportionment a resolution was adopted authorizing the appropriation of $15.000 to the Board of Health for the payment of physicians, inspectors, and nurses, the purchase of drugs, and other expenses connected with the work of caring for sick children during the summer, and of preventing the spread of contagious and infectious diseases. At the same meeting $27,427.98 of the excise moneys was appropriated to various charitable institutions in the city.

— At the annual meeting of the New York State Teachers' Association, which was held at Yonkers during the past week, the first subject brought up for discussion was Near-Sightedness in Schools. The report of a special committee appointed to consider it at the last session was read by Mr. C. J. Buell, of Bronxville, who mentioned in the course of it that last year thirty thousand persons of all grades of education were examined for myopia; and that it was found that young children who had never been at school, and persons who had never read or studied to any extent, were nearly exempt from it, while the percentage of the near-sighted increased from the time of commencement of school-life until among college graduates the largest number were found. Dr. E. G. Loring, Jr., of New York, said that bad ventilation was a very prominent factor in the production of the affection. Eight per cent. of the boys between seven and eight years old who were examined were found to be near-sighted, but only three per cent. of the girls of the same age.

— The death-rate of the city of Yonkers, which has always been found to be one of the healthiest places in the country, having increased about three per cent. during the past year, an important matter of drainage is now exercising the community. Through the town, which is beautifully situated on the banks of the Hudson, flows the Nipperhorn River, which, during the winter and early spring, is swollen to large proportions, but in the summer becomes almost dry. On its shores are a considerable number of large manufactories, and it is alleged that refuse matter from these mills, as well as from some private sewers that empty into *it*, contaminate the stream, and make it dangerous to the public health. Two plans have been proposed to increase the salubriousness of the town, one being to construct a sewer in Main Street at a cost of one hundred thousand dollars, and the other to wall in the Nipperhorn River, which would seem to be the proper one to adopt. One objection to the latter is, however, that the mills derive their water-power from the river, although many of them use steam also. Some time ago the Westchester County grand jury found an indictment against several of the mill owners for "maintaining a nuisance," but the matter never came to a trial. As the question is an important one for the interests of the community, the common council has not taken any decided action, but a short time ago invoked the aid of the local Board of Health. This body, again, appealed to the State Board of Health to send competent delegates to Yonkers, and decide the matter. An answer has just been received, however, to the effect that the local board has full power to act in the premises, and that a special memorial to the governor of the State would be necessary if they still desired the intervention of the State Board.

Miscellany.

LETTER FROM DRESDEN.

THE LYING-IN HOSPITAL IN DRESDEN.

Mr. Editor, — Having spent several months in this institution, I send a few notes on the manner in which it is conducted, hoping they may be of interest. The hospital is situated in the corner of an old palace park in a pleasant suburb of Dresden. The building has four stories, the first three for patients. The gynæcological wards are on the ground floor, the lying-in wards, together with rooms for private patients, assistants, internes, and so forth, on the second and third. There are two delivery rooms, each with its corresponding wards for those lying-in women who have already been confined. While one set is in use the other remains empty, and is thoroughly ventilated. The number of confinements of late years has been between eleven and twelve hundred a year. Besides the ordinary operating-room there are two or three especially for ovariotomies. Though the hospital is a royal institution it is practically under the exclusive direction of Dr. Winckel, whose name is intimately connected with obstetrics and gynæcology. Two assistants, who must be Saxons, and who hold office for two years, stand between him and the internes, whose number is not limited. The position of interne is open to all foreigners who can furnish evidence of sufficient medical education, or pass a successful examination. Each interne is furnished with a separate room, whence he is called at all times day and night in all cases of obstetric emergency. An entrance fee of about five dollars and a monthly room rent of about eight dollars must be paid by foreigners.

The interne is expected to visit the patients assigned to him at least twice a day, and to write careful records of each case, to accompany Dr. Winckel on his morning visit, to attend the polyclinic, and to be present at all gynæcological operations. Beyond this his time, barring emergencies, is practically at his own disposal. All the ordinary nurses are pupils in a training-school, which is under the direction of Dr. Winckel, while the head nurse superintends the house work. The course of instruction lasts six months. At the end of this time an examination is held, and three of the students are chosen to serve as under-nurses for the ensuing six months. Each under-nurse has charge of a certain number of wards, and is supposed to give instruction to the new students in their various duties.

Lectures and recitations, together with the information acquired in the hospital routine, are thought sufficient to qualify a midwife to take charge of a district outside, where she can practice her profession, with the understanding that she must call upon the district physician in difficult cases. The text-book by Crédé and Winckel, which forms the basis of instruction, is a thorough compendium of the art of midwifery, and in the simplest possible language states the exact directions for treatment in each case, the limits of responsibility, and the emergencies where a physician's aid is necessary.

When an interne enters the institution he is given the charge of a number of patients, varying inversely with the number of internes. At first he has the children to care for, and the duty of examining all women who, in the later months of pregnancy, wish to enter the hospital as servants. Soon he receives charge of those women already confined, and, later, of the patients in the delivery room.

On leaving the delivery room he takes the gynæcological station, or returns to whatever other station may be open to him. Each interne must sign his name to the records he keeps. Upon the delivery journal must also be written the names of all persons who in the given case have made an internal examination. If, now, this patient, later, has high fever, and shows other signs of infection, those whose names stand upon the journal are prohibited for some days from making internal examinations, and the interne in charge of the delivery room must immediately give it up.

Dr. Winckel is a believer in the theory that infection cannot take place through the air, and that in cases of infection the fault is due to negligence or uncleanliness on the part of the person or persons who have had to do with the lying-in woman.

Dr. Winckel starts on his morning visit at about eight o'clock. Any case of special interest is carefully explained by him. At about ten o'clock the morning duties are generally over. Twice a week a polyclinic is held for gynæcological cases. Each interne takes a case, writes up the history, makes the physical examination and his diagnosis. Later, each case is read before Dr. Winckel, after which he examines the patient systematically, explaining at each step. He then gives the proper diagnosis and the directions for treatment. When it is necessary for the sake of clearness, diagrams are drawn, and specimens in alcohol, of which the hospital has a valuable collection, are demonstrated. Once a week all assemble in Dr. Winckel's private rooms. Here one of the number reads a summary of some article recently published of interest in obstetrics or gynæcology. The whole is then carefully criticised by the doctor. If new methods of treatment worthy of further trial have been suggested, they are sometimes adopted on trial in the wards. At one time a summary was read on the Use of Laughing-gas as an Anæsthetic in Labor. Klikowitsch had published full details of the experiments on twenty-five cases in the Archiv für Gynæcologie Von Crédé und Speigelberg, Band xviii. The results obtained with a mixture of laughing-gas four fifths and of oxygen one fifth were remarkably successful. Klikowitsch affirms that the inhalation of this gas during delivery causes a striking diminution in actual pain without interfering with the length of the "pains" or the pauses; that the consciousness remains complete throughout; and that the lying-in woman is thereby enabled to assist the pains by voluntary muscular action, that no danger attends the administration of this gas, and that the disagreeable sequels of anæsthesia usually observed, vomiting, headache, and so on, are wanting. A trial of this method was made later in the hospital at Dresden in twenty cases of particularly painful labor. Practically the same results, which Klikowitsch noticed in his twenty-five cases, were obtained. The gas was found, however, to be of far greater value in the first stage of labor than later. These experiments were to have been continued, and later the results obtained in a large number of cases published.

In each case of death in the hospital the body is carried to the autopsy-room of the city hospital near by, and Dr. Birsch-Hirschfeld performs the autopsy. The interne formerly in charge of the case is expected to be present and fill out the autopsy journal from dictation.

The system in Dresden of keeping journals seems to work remarkably well. The journals of pregnancy, of delivery, of the puerperal state, as well as those for the child and for autopsies, are all numbered according to the admittance number of the case.

Finally, all are brought together and the whole history, though written by different persons, is complete from beginning to end. All the journals are carefully sorted, filed away, and later bound together into huge volumes. Ovariotomies at the Dresden hospital are remarkably successful, and "first intentions" the rule. The operating room is aired for one or two days before the operation, and the spray is set in action a couple of hours before the patient is brought in. The operation is carried out with all the Lister precautions. The silk-worm gut (*fil de Florence*) is much preferred to silk or catgut for closing the external wound in this operation, as well as in colporrhaphy, ruptured perinæum, and so forth. Its stiffness is thought to hold the lips of the wound in much more perfect apposition.

Very truly yours, George H. Monks, M. D.

Dresden, *May*, 1882.

LETTER FROM MINNEAPOLIS.

Mr. Editor, — In your Journal of June 22d the letter from St. Paul contains so much of and about that city and so little of Minneapolis, and that little of such a disparaging nature, that I am tempted to send these few lines.

Your correspondent says that Minneapolis has the disadvantages of St. Paul in respect to "drainage," for it "is situated on the more level ground on the flat shores of the Mississippi, probably depending largely upon wells for its water supply, and has a good many cases of typhoid fever."

I am afraid he was too much interested in seeing if the "champagne flowed like water" when he wrote you that, for if he had viewed the country between the two cities he would have seen that St. Paul is but the beginning of a gentle rise of the country westward, and that the bank of the river along the whole border of Minneapolis is in no place less than forty feet, and most of it over one hundred feet high. We have many wells it is true, but we also have a fine water supply, the Holly system being in use here. It is impossible to obtain all the conveniences of a city in a moment, but we have far-sighted and enterprising citizens, and the water supply is being rapidly carried to all parts of the city.

Minneapolis looks flat of course, to some people, but a deal of money has been spent, in its short life, for grading the streets according to our ideas. This does not injure our drainage, however, and to-day we have as fine a system as any city in the United States.

We have had some sickness since last September; so have other cities. We have correct monthly reports of our mortality so that everybody may see just the condition. Still our death-rate is no larger in proportion than many other localities, daily papers to the contrary notwithstanding. Our population is over 60,000, some say over 70,000. Five years ago we numbered 35,000 souls. Room has had to be made for all these people, and the upturning of so much ground for the construction of houses, with the condition of the elements, might be important factors in producing sickness.

But have we been visited by typhoid fever? It has gone forth as such, but the cases of fever I have seen since last September did not present those symptoms which we were taught at Harvard were characteristic of typhoid. The condition of the tongue, pulse, intestines, and stomach, was far different from that seen in typhoid in Boston. The temperature was the only thing that resembled typhoid. Then again, so far as I have been able to learn, there has not been made a single post-mortem, but so soon as a case terminated fatally it was "returned" typhoid and buried.

Now there has been abundant opportunity on the part of many physicians to look carefully into this matter of fever and verify the diagnosis by post-mortem, but they have not seen fit to do so, and it has gone forth that we have had a high death-rate, and that typhoid fever entered largely into the cause, when in reality it was not the case, or else the fever exists here with symptoms far different from those we find East.

Another cause for an erroneous return of death is the existing state of the profession. We have no State law regulating the practice of medicine, consequently everybody and anybody may come in here and do just as he sees fit, and there is no redress. The more a man advertises in our daily papers, or by hand bills, the larger practice he acquires, and he can obtain a kind of "good-standing" by admission to membership in the State Society through the good word of some brother already a member. What can be the standing of a State Society which will admit applicants to membership and good standing after adjournment?

It is a misfortune that more of the profession from Boston could not have been present at St. Paul. After adjournment of the National Association all the railroads West were in waiting with free transportation. Monday evening, June 12th, the larger number of the physicians with their families took the Manitoba train for Winnipeg, C. P. Arrived in that place Tuesday evening, passed the next day, and Wednesday evening returned to Glyndon, Minn., where the Northern Pacific Railroad had cars in waiting and took the whole party to Miles City, M. T., allowing a day at Fargo, D. T., to enjoy the hospitality of that place; another day at Bismarck, D. T., where all had an opportunity to visit the last town of that Territory, and inspect the construction of the railroad bridges across the Missouri; to visit Fort Lincoln and the new town of Mandan, M. T. By transfer boat across the Missouri the trip was continued to Miles City, where a day was spent in seeing this sample of a frontier town and to visit Fort Keogh. The railroad runs for several miles in full view of the Yellowstone; and scenery more grand is rare to find even in New England.

Of particular interest were the Bad Lands. The road runs through this remarkable geological condition for miles. Many passed a day securing handsome and rare specimens of petrifaction. Some stopped at Terry and enjoyed a day hunting the buffalo, and were successful in securing a prize of some kind, for game is very plenty.

In due time the party bid farewell to Montana, and arrived in Minneapolis Wednesday morning, June 21st, all agreeing that the time was very profitably and enjoyably occupied.

We here hope the time may soon come for another meeting of the Association to be held in this city, and that a greater number may be able to be present.

Very truly, W. M.

Minneapolis, *June* 28, 1882.

◆

A CASE OF FACE PRESENTATION IN THE MENTO-POSTERIOR POSITION.

Mr. Editor, — My object in reporting the above is to draw out the views and experience of other physicians in similar cases. Authors and writers upon this subject all seem to concur that in face presentations, where the chin does not turn to the front, it is not safe for the mother, to say nothing about the almost inevitable death of the child, to trust such cases to the efforts of nature, or even to delay in rendering prompt assistance.

It is further conceded as a general, if not an almost absolute, rule, that in face presentations, whatever may have been the relations of the chin with the circumference of the superior strait at the commencement of labor, the chin must rotate to and be brought under the symphysis pubis before labor can terminate spontaneously.

It is doubtless true that there have been exceptions to the above rules, but according to Cazeaux, and other well recognized authorities in the cases reported, the fœtuses were small and dead, and the mothers had on former occasions been delivered of large children. In the cases just referred to, the reported mechanism of labor has been sharply criticised, and even regarded as utterly impossible, by Cazeaux and others.

Generally, in face presentations, the efforts of nature alone have an almost never failing tendency to bring the chin forward. She sometimes fails to accomplish this, and then she relies entirely upon the aid of the attending physician.

"For," says Dr. Bedford, "you are to recollect that in no case, unless as an exception, if I may be permitted to say so, to an almost universal rule, can the head be made to accomplish its exit through the maternal organs if the chin continues to remain in a posterior position."

In view of the foregoing statements, drawn from the best authorities, the pertinent question arises, what is to be done in mento-posterior positions of the face? Taking it for granted that all physicians are familiar with the many methods proposed by various authors, I will only speak of version, which was adopted in the case I am about to report.

Mrs. B., multipara, aged twenty-five, was seized with labor pains shortly before midnight on the 8th inst. This was her second pregnancy. The first child was delivered with forceps, still-born, some two or three years ago, by two Attleborough physicians, after labor had continued nearly two days. In her present illness the pains were reported to have continued regularly until three P. M. the next day, when they entirely ceased.

I first saw her at 3.30 P. M. Upon examination I found the os well dilated, membranes flaccid and extending in vagina nearly to vulva. I experienced no difficulty whatever in touching the child's head. This was all the examination made at this time. Her condition in other respects was excellent, no nervous excitement, skin cool and moist, tongue clean, and pulse normal. I now left her, promising to return at six P. M. I could not help being surprised that the pains should cease just before the commencement of the second stage of labor, and saw her again at the time specified. No change whatever had taken place since my first visit. I left her again, telling her husband to notify me when the pains should recur.

I was called at 9.30 P. M. Pains had commenced half an hour before, and were now occurring at frequent intervals, and with great severity. An examination showed that the membranes became tense during a pain, but otherwise everything was precisely as I found it six hours before. While touching her the membranes became ruptured, after which I made a careful and thorough investigation. My mortification and chagrin can readily be imagined when the following interesting state of affairs became apparent.

The anterior angle of the anterior fontanel was discovered just above the pubis. Passing directly backwards in the median line over the forehead, the nose with the orbits on either side were readily made out. Continuing further backwards and downwards over the nose, the finger entered the mouth, where the action of suction on the part of the child was distinctly felt. Having in my practice and in consultation witnessed ten cases of face presentation where labor was terminated safely though tardily, without version or forceps, I determined to give nature a fair chance, hoping that a spontaneous delivery might occur through one of the reported though doubted mechanisms laid down by various authors. The husband and friends were now notified of the true state of affairs, and that the chances were largely against the child's being born alive. No further examination was made for nearly five hours, during which time the pains continued at regular intervals and with great severity. The only change noticed was marked and increased tumefaction of the presenting parts.

I now informed the husband and friends that the time had arrived when assistance must be rendered, as further delay would doubtless prove disastrous to the mother as well as the child. Dr. Frank B. Fuller saw the case in consultation soon after, and agreed with me both regarding presentation and position.

After carefully considering the various methods of delivery, we came to the conclusion that version was the only procedure that offered any hope of delivering a living child.

The patient being placed under the influence of ether and in the usual position, the right hand was introduced into the vagina, and two ineffectual attempts made to carry the chin to the sternum and bring the occiput under the pubes. Passing the hand slowly and carefully into the uterus, the child's left foot was seized and brought beyond the vulva. This was now enveloped in a napkin and held firmly with the left hand, while in the absence of a pain, steady and firm pressure was made against the presenting head with the other. Dr. Fuller carefully steadied the womb, and rendered valuable assistance during the operation. The head almost instantly receded, and the delivery was quickly terminated in the usual manner. The child was a male, and weighed when dressed nearly ten pounds.

Thus terminated, very happily, a case which promised to give us a great deal of trouble. I have often wondered why authors attach so much danger to the mother from podalic version. In seven other cases, besides the one reported above, which have occurred in my practice, all shoulder presentations but one, the operation was quickly, easily, and safely performed. The mothers all recovered without a single unfavorable symptom. Two children of the eight were still-born, one in a case of placenta prævia, the other where the hand had been beyond the vulva quite a while before the operation was attempted, and forceps were used in delivering the head.

While I ask free discussion and criticism upon this case, I feel compelled to add that I am convinced that in mento-posterior positions of face presentations, version should be the first thing tried as offering about the only chance for a living child, and promising, if slowly, carefully, and successfully performed, the best results to the mother. I am fully aware that I am speaking from very limited experience, and from a case in which the conditions were very favorable to the success of the operation.

I will also add that the operation should be attempted at the earliest possible moment consistent with the peculiarities of the case, and never without the administration of an anæsthetic.

PHANUEL E. BISHOP, M. D.

PAWTUCKET, R. I., *June* 18, 1882.

THE ALLEGED INSANITY OF GUITEAU.

MR. EDITOR, — Will you allow a layman to ask a question?

If certain physicians felt sure that Guiteau was insane, why did they not save his life by testifying at the trial? It is no answer to say, that those who did testify were not properly cross-examined, and so had no chance to express their full opinion. In such an event it was their duty to go to the counsel for the defense, after the session of the court, and demand to be recalled and properly cross-examined. They were the only men who could prove him insane. It was incumbent on them to insist on being heard.

My own conscience is clear, because, after reading the excellent essays published in the JOURNAL, I am still of the opinion that Guiteau was simply a bad and depraved man, and I have found nobody outside the medical profession who was not of the same way of thinking.

As for the physicians who might have testified and who did not testify, the least we can say of them is that they now are estopped. THEODORE LYMAN.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 1, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	780	389	37.17	10.31	19.91	5.51	3.81
Philadelphia	846,984	372	145	15.41	4.56	—	4.82	2.41
Brooklyn	566.689	298	152	30.82	11.39	15.08	5.03	4.35
Chicago	503,304	188	103	23.84	10.31	7.45	4.79	—
Boston	362,535	150	62	45.31	10.66	3.33	3.33	5.33
St. Louis	350,522	222	143	40.25	3.60	24.30	1.80	4.05
Baltimore	332,190	242	147	41.71	1.65	32.62	.41	1.65
Cincinnati	255,708	168	88	42.60	5.40	16.40	3.00	4.20
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	148	100	49 28	1.35	43.89	.68	1.35
Pittsburgh	156,381	105	57	33.33	1.66	14.28	3.71	—
Buffalo	155,137	65	22	23.07	1.54	—	1.54	3.08
Milwaukee	115,578	43	23	4.65	11.62	2.33	—	—
Providence	104,857	39	11	12.80	—	7.68	2.56	—
New Haven	62,882	28	8	3.57	3.57	—	—	—
Charleston	49,999	41	19	24.40	2.44	2.44	—	—
Nashville	43,461	25	8	32.00	—	16.00	—	—
Lowell	59,485	18	9	11.11	11.11	5.55	5.55	—
Worcester	58,295	16	11	12.50	12.50	6.25	—	6.25
Cambridge	52,740	27	10	18.55	7.42	3.71	7.42	—
Fall River	49,006	14	5	7.14	7.14	—	7.14	—
Lawrence	39,178	12	8	50.00	—	8.33	16.56	—
Lynn	38,284	11	3	—	—	—	—	—
Springfield	33,340	6	1	33.33	—	16.66	—	—
Salem	27,598	8	4	12.50	—	—	—	—
New Bedford	26,875	11	3	18.18	9.09	9.09	—	—
Somerville	24,985	7	5	42.8	—	—	14.28	—
Holyoke	21,851	7	3	28.56	—	14.28	—	—
Chelsea	21,785	8	4	25.00	—	12.50	12.50	—
Taunton	21,213	6	—	—	—	—	—	—
Gloucester	19.329	3	2	—	—	—	—	—
Haverhill	18,475	4	—	25.00	—	—	—	—
Newton	16,995	4	2	—	25.00	—	—	—
Brockton	13,608	1	—	—	—	—	—	—
Newburyport	13.537	4	1	—	—	—	—	—
Fitchburg	12,405	2	—	—	—	—	—	—
Malden	12,017	2	1	—	—	—	—	—
Eighteen Massachusetts towns	150,076	39	8	15.38	5.13	5.13	2.56	—

Deaths reported 3124 (no report from New Orleans): 1555 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 928, consumption 316, lung diseases 208, diarrhœal diseases 468, diphtheria and croup 112, scarlet fever 83, measles 64, whooping-cough 51, typhoid fever 40, small-pox 39, cerebro-spinal meningitis 24, malarial fevers 23, puerperal fever 11, erysipelas nine, typhus fever four. From *measles*, New York 19, Chicago nine, St. Louis six, Baltimore, Pittsburgh, and Buffalo five each, Boston four, Brooklyn three, Philadelphia, Cincinnati, and Lawrence two each, Milwaukee and Nashville one each. From *whooping-cough*, New York 15, Brooklyn eight, Boston seven. St. Louis six, Charleston five, Pittsburgh four, Philadelphia, Baltimore, Cincinnati, District of Columbia, Salem, and Holyoke one each. From *typhoid fever*, Philadelphia 13, Chicago and Pittsburgh four each, Boston three, New York, St. Louis, Baltimore, and Nashville two, Brooklyn, Cincinnati, District of Columbia, Buffalo, Providence, Lawrence, Haverhill, and Spencer one each. From *small-pox*, Cincinnati 23, Chicago five, Baltimore four, Philadelphia three, New York two, Brooklyn one. From *cerebro-spinal meningitis*, New York and Cincinnati four each, Buffalo three, Boston, Baltimore, Cambridge, and Somerville two each, Philadelphia, St. Louis, Pittsburgh, New Bedford, and Attleborough one each. From *malarial fevers*. New York six, Brooklyn five, Charleston four, St. Louis and District of Columbia three each, Baltimore and Nashville one each. From *puerperal fever*, Chicago three, New York, Pittsburgh, and Milwaukee two each, Philadelphia and Brooklyn one each. From *erysipelas*. Philadelphia and Baltimore two each, New York, Chicago. Boston, Springfield, and Peabody one each. From *typhus fever*, New York four.

Eighty cases of small-pox were reported in Cincinnati, Baltimore 37, Buffalo six, Nashville two; diphtheria 16, scarlet fever 13, typhoid fever five, in Boston; scarlet fever eight, and diphtheria six, in Milwaukee.

In 35 cities and towns of Massachusetts, with a population of 993,008 (population of the State 1,783,086), the total death-rate for the week was 16.95 against 12.17 and 16.65 for the previous two weeks.

For the week ending June 10th, in 173 German cities and towns, with an estimated population of 8,511,770, the death-rate was 28.1. Deaths reported 4603: under five 2425; pulmonary consumption 586, acute diseases of the respiratory organs 469, diarrhœal diseases 286, diphtheria and croup 157, scarlet fever 86, typhoid fever 57, whooping-cough 55, measles and rötheln 44, puerperal fever 18, small-pox (Beuthen two, Königsberg, Essen and Strasburg each one) five, typhus fever (Königsberg two, Stargard and Bromberg each one) four. The death-rates ranged from 15.7 in Wurzburg to 39.5 in Braunschweig; Königsberg 33.7; Breslau 30.4; Munich 34.4; Dresden 28.2; Berlin 35.8; Leipzig 22.9; Hamburg 25.2; Cologne 34.7; Frankfurt 20.8; Metz 27.4.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending June 17th, the death-rate was 19.0. Deaths reported 3079: acute diseases of the respiratory organs (London) 200, whooping-cough 146, measles 84, scarlet fever 72, diarrhœa 76, fever 40, diphtheria 24, small-pox (London 15) 23. The death-rates ranged from 11.2 in Norwich to 26.2 in Preston; Plymouth 14.7; Leicester 16.1; London 17.9; Birmingham 18.9; Leeds 20.1; Portsmouth 22.5; Liverpool 23.3. In Edinburgh 17.1; Glasgow 22.7; Dublin 19.3.

For the week ending June 17th, in the Swiss towns, population 494,390, there were 34 deaths from consumption, diarrhœal diseases 22, acute diseases of the respiratory organs 13, scarlet fever six, diphtheria and croup three, measles two, whooping-cough two, typhoid fever two, erysipelas one. The death-rates were, at Geneva 13.4; Zurich 20.3; Basle 20.4; Berne 31.

The meteorological record for the week ending July 1st, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date. June–July, 1882.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 25	29.685	81	92	69	83	50	58	64	SW	W	W	3	12	12	O	F	O	—	—
Mon., 26	29.734	76	88	68	64	40	66	57	W	W	Calm	4	16	0	O	F	F	—	—
Tues., 27	29.862]	72	81	64	54	38	66	53	W	NW	W	12	20	8	C	F	F	—	—
Wed., 28	29.788	70	87	61	61	55	70	62	W	SE	W	3	4	7	F	T	C	—	—
Thurs., 29	29.840	67	77	60	60	32	54	49	NW	NW	NW	15	14	12	F	F	C	—	—
Fri., 30	29 952	64	77	52	61	38	81	60	NW	W	SW	11	1	8	F	O	R	—	—
Sat., 1	29.706	55	61	52	96	100	93	96	SE	E	NW	16	12	10	R	R	T	—	—
Means, the week.	29.795	69	92	52				63										10.20	.57

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 24, 1882, TO JULY 7, 1882.

Hoff, J. V. R., captain and assistant surgeon. Having reported at these headquarters, is assigned to duty as post surgeon at Alcatraz Island, Cal. S. O. 107, Military Division of the Pacific and Department of California, June 17, 1882.

Gardner, E. F., captain and assistant surgeon. Relieved from duty at Vancouver Barracks, W. T., and assigned to duty as post surgeon at Fort Cœur d'Alene, Idaho. S. O. 83, Department of the Columbia, June 19, 1882.

De Loffre, A. A., captain and assistant surgeon. Relieved from further duty at Fort Wallace, Kans., and assigned to duty at Fort Sill, Ind. Ty. S. O. 124, Department of the Missouri, June 21, 1882.

O'Donnoghue, F., captain and medical storekeeper. Died at New York City, June 29, 1882.

Head, John F., lieutenant-colonel and surgeon. Granted leave of absence for fifteen days. S. O. 153, A. G. O., July 3, 1882.

Under the provisions of Section 1 of the Act of Congress, approved June 30, 1882, the following-named officers are by operation of law this day retired from active service, namely: Brigadier General **Joseph** K. **Barnes**, surgeon-general; Colonel **John** M. **Cuyler**, surgeon; Colonel **William** S. **King**, surgeon; Lieutenant-Colonel **James Simons**, surgeon. S. O. 151, A. G. O., June 30, 1882.

Correction. — A correspondent writes to correct a statement, attributed to Dr. McLean, in the report of the meeting of delegates from the Boards of Censors on page 592, vol. cvi., of the **Journal**. The words "the case of the *dean* of a so-called medical college," should have been "the case of a former *teacher*," etc.

Books and Pamphlets Received. — Sarcoma and Carcinoma; their Pathology, Diagnosis, and Treatment. By Henry Trentham Butlin, F. R. C. S., Assistant Surgeon, etc.

Circulars of Information of the Bureau of Education. No. 6. 1881. The Effects of Student Life upon the Eyesight. By A. W. Calhoun, M. D., Professor of the Eye, Ear, and Throat in the Atlanta Medical College.

The Physician Himself and What he should add to the Strictly Scientific. By D. W. Cathell, M. D., late Professor of Pathology in the College of Physicians and Surgeons of Baltimore, etc. Baltimore: Cushings & Bailey. 1882.

The American College Association. Sixth Annual Meeting, held at Cincinnati, Ohio, May 16, 1882.

The Announcement of the Women's Medical College of Baltimore, No. 126 North Eutaw Street, Baltimore, Md., for the Session of 1882–1883.

On the Treatment of Cancer. By John Clay, Professor of Midwifery in Queen's College, Birmingham. London: J. & A. Churchill. 1882.

Giornale della R. Accademia di Medicina di Torino pubblico a per cura Dell' Ufficio di Presidenza. Anno XLV. Num. 4.

The Official Gazette of the United States Patent Office, containing the Patents, Trade-Marks, Designs, and Labels issued Tuesday, May 30, 1882. Published by authority of Congress.

Diseases of the Ear in Children. By Anton von Troeltsch, M. D., Professor in the University of Würzburg. Translated by J. Orne Green, M. D., Aural Surgeon Boston City Hospital, etc. From Gerhardt's Handbuch der Kinderkrankheiten. New York: William Wood & Co. 1882.

Genius Resistless. An Ode. A Tribute to Jenner and Pasteur. By J. J. Caldwell, M. D. Baltimore, Md.: Printed by William K. Boyle. 1882.

Materia Medica and Therapeutics. Inorganic Substances. By Charles D. F. Phillips, M. D., late Lecturer on Materia Medica and Therapeutics at the Westminster Hospital Medical School. Edited and adapted to the United States Pharmacopœia by Laurence Johnson, A. M., M. D. Vol. II. New York: William Wood & Co. 1882. Wood's Library of Standard Medical Authors. May.

Lectures on Diseases of Children. A Handbook for Physicians and Students. By Dr. Edward Henoch, Director of the Clinic and Polyclinic for Diseases of Children in the Royal Charité and Professor in the University of Berlin. New York: William Wood & Co. 1882. Wood's Library of Standard Medical Authors. March, 1882.

The Experimental Method in Medical Science. Second Course of the Cartwright Lectures of the Alumni Association, College of Physicians and Surgeons, New York, delivered January 24, January 31, and February 7, 1882. By John C. Dalton, M. D. New York: G. P. Putnam's Sons. 1882.

Papers and Proceedings of the National Association for the Protection of the Insane and the Prevention of Insanity at the Stated Meeting held in New York City, January 20, 1882. New York: G. P. Putnam's Sons. 1882.

Catalogue of the Massachusetts College of Pharmacy, 1882–1883.

Syphilis. By V. Cornil, Professor in the Faculty of Medicine of Paris and Physician to the Lourcine Hospital. Translated, with Notes and Additions, by J. Henry C. Simes, M. D., and J. William White, M. D. With Eighty-Four Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882.

Annual Reports of the Trustees, Superintendent, Treasurer, and Financial Agent of the New Hampshire Asylum for the Insane to the Governor and Council, June, 1882.

On Ovarian and Uterine Tumors; their Diagnosis and Treatment. By T. Spencer Wells. Philadelphia: P. Blakiston, Son & Co. 1882.

Transactions of the American Gynæcological Society. Volume VI. For the Year 1881. Philadelphia: Henry C. Lea's Son & Co. 1882.

The Fifty-Eighth Annual Report of the Officers of the Retreat for the Insane at Hartford, Conn. April, 1882.

Annual Announcement of Trinity Medical School. Toronto.

On the Abortive Treatment of Buboes and Lymphadenitis generally by Injections of Carbolic Acid. By Morse K. Taylor, M. D., Captain and Assistant Surgeon U. S. Army. (Reprint from American Journal of the Medical Sciences, April, 1882.)

Preventing Disease. A Lecture by J. R. Black, M. D., of Newark, Ohio, delivered at Columbus, Ohio.

Original Articles.

INFANTILE MORTALITY: ITS CAUSES AND PREVENTION.[1]

BY JAMES P. LYNDE, M. D., OF ATHOL, MASS.

Mr. President and Fellows, — The Thirty-ninth Registration Report of Massachusetts is a valuable record of vital statistics, useful and interesting to the physician, the sanitarian, and political economist.

From its carefully prepared tables we learn the relative mortality of the different diseases, as influenced by age and sex, that prevail among our people, and are enabled to study those that are wholly or in part preventable, that we may check their ravages and promote the public health.

We find that in the year 1880 our population was 1,783,085. The number of deaths were 35,292, of which "consumption, as in previous years, heads the list," with a mortality of 5,494.

We also find that there were born alive during the year 44,217 children. In the same period 7190 died during the first year of life; 2281 the second year; 1250 the third; 857 the fourth; 635 the fifth; a total of 12,213 children who died under five years of age; 1463 died between five and ten, and 611 from ten to fifteen, showing that with increasing bodily development there is decreasing mortality, and that the age of infancy is the most perilous period of life. The deaths of the first year are 16.26 per cent. of the births and 20.04 per cent. of the deaths. The deaths under five are 34.60 per cent., or a little more than one third of the deaths.

This valuable registration report in its record of mortality, from "twelve of the most prominent causes in 1880," credits consumption with 5494, pneumonia 3076, cholera infantum 2118 victims.

When we consider that cholera infantum is a disease that occurs usually in the first year of life, among infants artificially nourished, and that consumption and pneumonia occur during almost the whole remaining period, grouping about certain ages more than others, it is evident that the deaths from cholera infantum, and the diseases from infancy and childhood, are the most suggestive and important on the list of vital statistics.

It is also very evident that the infant at birth, and for a long time after, is weak, feeble, immature, imperfectly developed, unable to bear successfully the vicissitudes of climate, resist morbific influences, and maintain its hold on life against adverse circumstances and the ignorance and inexperience of those intrusted with its care; and we are not surprised to find this period of life attended with excessive mortality, some of the causes of which, and its prevention, claim our consideration.

(1.) Among these causes are prenatal hereditary influences and inherited tendencies to certain forms of disease, like scrofulous and syphilitic affections, in their many varied forms, and congenital disturbances of fœtal growth, often caused by perturbating influences, affecting powerfully the nervous system of the pregnant woman. These causes cannot be avoided; they are beyond the control of the physician. We can advise the expectant mother to live prudently, to avoid undue emotional excitement, preserve self-control, and maintain a serene, cheerful, happy state of mind and disposition. We can advise the unhealthy mother to raise the child with artificial food, and perhaps do something by medication to modify morbid constitutional tendencies, and thus preserve life. The number of still-born premature deaths for 1880 was 1297.

(2.) Another important cause is the prevalence of acute infectious diseases, which are often severe and deadly. The most loathsome of these, small-pox, may be fully prevented by vaccination; and may we not confidently hope that by improved methods of treatment, either preventive or special, scarlatina and diphtheria will be robbed of their terrors and cheated of their victims? The deaths from this cause, under five in 1880, were 1909.

(3.) Another cause of this mortality is the severe acute inflammations, such as pneumonia, meningitis, and others; too often caused by exposure of the child, insufficiently clothed, to severe climatic influences, in accordance with the popular idea that such treatment makes a child tough, hardy, and vigorous; a most mischievous notion, as only the most robust can survive such treatment. Ignorance and carelessness have much to do with this cause of mortality, which, in children under five, in 1880, amounted to 2269.

(4.) Another cause is the great anatomical and physiological crisis of infancy, dentition, which with many children is attended with slight disturbance of the general health or nervous system; but when we consider the active nutritive processes going on in the growing teeth and dental follicles, the hyperæmia, and turgescence of the surrounding tissues, the intense excitement of the local nerves, we are not surprised when this physiological process passes the bounds of healthy action, and through disturbed innervations causes functional and pathological changes in distant organs, requiring watchful care and judicious treatment on our part to overcome. Dentition is rarely dangerous, unless associated with other disturbing influences. It is therefore important that all morbid conditions due to other causes should be carefully investigated, or our treatment will be empirical, irrational, and unsatisfactory.

(5.) Infantile mortality is often increased by the unhealthy hygienic influences to which many children are subjected, such as breathing impure air; by living in small, close, dark, sunless, overcrowded, ill-ventilated rooms; exposure to cold; heat, filth, want of proper care and clothing, impure water, and unsuitable food. Mortality from other causes is greatly increased by these insanitary conditions, which are attributable in a large measure to parental negligence and ignorance, which can only be overcome by carefully instructing the people, and stimulating their moral sensibilities; a work which requires time and patient effort, but sure in the distant future to be accomplished. A large share of this responsibility rests upon our profession, and we should improve every suitable occasion to instruct, advise, admonish, and warn the people. The perfect sanitary house and home has not yet been built and established by man! It is only to be secured in the mansions of the ideal, heavenly hereafter!

(6.) The influence of intense solar heat upon the mortality of infant life is well known, and so important that we cannot neglect its consideration. If we again consult the valuable Registration Report, we shall find that July, August, and September, the hot months of the year, are peculiarly fatal to infants, by the prevalence of diseases of the central nervous system and digestive organs, such as convulsions and cephalitis, diarrhœa, dysentery, and cholera infantum. To a certain degree, peculiar to each department of organic life, solar heat is an essential stimulant and excitant to all the processes of growth and nutrition. Above and below certain ranges of temperature, all forms of life are impossible. Our human life is a mystery, so is every manifestation of the life force in every aspect of investigation. Next to the mystery of thought is the mystery of animal heat; constant in man, in health, under all external conditions, at about 98.4° of Fahrenheit's scale. A few degrees above this point is speedily fatal, through change in the soluble albuminoid constituents of the tissues, arresting muscular contraction, circulation, and respiration. The influence of solar heat upon human life cannot be studied, except in connection with many other coincident conditions, which modify its effects, such as the moisture of the air, atmospheric currents, electric and magnetic influences, the state of the bodily functions, the supply of food and drink, clothing and exercise. Cases of insolation afford examples of its depressing influence and deadly power. The functions of perspiration and renal secretion are checked or arrested, and a condition closely resembling that of uremic poisoning is established, attended with convulsions, and congestions of the brain, lungs, and internal organs, great depression of the nervous system, a rapid rise of bodily temperature, and speedy death. The most important physical property of heat is its power to expand minerals, gases, and almost all substances subjected to its influence. It rarefies the air, so that the important function of respiration is imperfectly performed, less oxygen is inhaled, and the exhalation of carbonic acid is diminished. The gases contained in the tissues are expanded, the circulation is enfeebled, the secretions are checked, and the functions of the nerve centres which regulate circulation, respiration, and nutrition, maintain physical vigor, resist disease, and preserve the integrity of the organization, are greatly depressed, especially in delicate, ill-nourished, poorly fed infants, living under unfavorable hygienic influences. The indirect effect of radiant heat on the health of children and older persons is important, through its power to excite and quicken the processes of fermentation and putrefaction, in foods of a perishable nature, such as eggs, milk, fresh meat, fish, bread, fresh vegetables, and fruits, rendering them unfit for consumption, causing gastric and bowel derangements, that may be severe and fatal. To overcome this powerful cause of infantile mortality, it is important that the child should be kept quiet at home in the largest, coolest room in the house, supplied with light clothing, frequent cool baths, fresh air, and pure water. If necessary, cool the air of the room by keeping ice in a tub, or by hanging a wet sheet near inflowing currents of air. The refrigerator is an indispensable luxury and necessity with the rich. An abundant supply of ice for the poor, in hot weather, would favorably affect the mortality of infants, and greatly increase the comfort, health, and happiness of such people.

---

[1] Read at the annual meeting of the Massachusetts Medical Society, June 14, 1882.

(7.) We will now consider the most important of all causes of infantile mortality: the use of improper, indigestible articles of food — the prolific cause of gastric disturbance, diarrhœa, colitis, cholera infantum, and starvation. Milk has been divinely ordered as the only proper food for the young of all classes of mammalia, and Nature has made provision for a bountiful supply. Milk is an animal food composed of several elements in variable proportionate quantities, in a state of emulsion, each of which is essential to the growth and nutrition, and no one that is superfluous to the necessities of the young mammal or human infant. In ordinary normal conditions, this fluid is abundantly and perfectly prepared in the mammary glands of the mother, and when properly administered fully meets the wants of the young child for both food and drink. Therefore it is a mother's most imperative duty to nurse her child, if possible, until several teeth appear, when it will desire, and be able to digest, animal and farinaceous food, and may be safely weaned.[1] The health and comfort of a child is greatly promoted by regular feeding, once in two hours and a half in the day-time, and twice in the night, and at longer intervals with increasing age.

We are often called to prescribe for children made sick by irregular nursing, every time they wake or worry, who have been dosed with Mrs. Winslow's infernal syrup of morphine, and the whole list of domestic remedies, and now comes the doctor, who will be expected to lance its gums, administer alteratives, laxatives, alkalies, astringents, tonics, stimulants, digestives, and more opium, which he may do only to be disappointed, unless he can persuade the mother to properly administer its food. Succeeding in this, the child will recover without medicine, and he can cure it in no other manner.

Again, to keep a child in a growing, healthy condition requires tact and judgment in its general management. The good physician will often remind mothers and nurses of the importance of pure air, sunlight, suitable clothing, and cleanliness. He will advise the mother to avoid visiting and traveling in the hot months, and keep the child quiet and cool at home, and offer it frequently cold water to relieve its physiological demand for fluids, and prevent it from overloading its stomach in nursing. He will advise frequent bathing to soothe, invigorate, and refresh its nerves. He will secure for it a good bed, at least when sick, and not allow it to be packed into a deep wooden box on rockers, with a rubber blanket or an old soiled comfortable to lie upon, with its head buried in a soft, hot feather pillow. A good-sized crib with a hair mattress, or a sack filled with clean oat straw, covered with a folded sheet, makes a good bed, especially in warm weather.

The good doctor will administer but little medicine for the disturbances incident to the process of dentition, for the child will not be well in hot weather, especially in the second summer, except under most favorable circumstances, until the teeth emerge or the autumnal frosts appear, making the air more bracing and invigorating, when diarrhœal disorders will speedily disappear.

Attention to these and many other seemingly unimportant, trifling matters secures good care, and good care is no trifle. It is indispensable if we would promote the health and comfort of our infants, and prevent this excessive mortality.

---

[1] The changes in the physical organization of our American women, growing out of our high pressure civilization, affecting their fecundity and their ability to properly perform the functions and duties of maternity, especially in nursing, have been ably discussed in the annual discourse for 1874, by Nathan Allen, M. D., LL D., of Lowell, and the reader is advised to review that address in this connection.

Circumstances may prevent the nursing of the child from its birth, or we may be obliged to wean sooner than is desirable; a wet nurse cannot be obtained, and artificial food must be provided. How shall this be secured?

The prevailing custom with physicians and nurses is to use cow's milk diluted with one, two, or three parts of water, with the addition of a little salt and sugar. Some prefer milk, water, and cream in variable proportions, or the use of some one of the many patent commercial foods that have recently been invented. Others rely upon thin gruels of arrowroot, corn starch, gelatine, barley, oatmeal, or wheat, either pure or enriched with milk. Such methods of artificial alimentation are recommended in all standard works on medicine, and by almost all teachers.

The books abound with learned arguments to prove that it is dangerous to administer undiluted cow's milk to an infant, and minute directions are given how to dilute, adulterate, and render it more acceptable and safe.

The chemist has been asked to determine, by the methods of his subtle art, the constituent elements and the difference between human and cow's milk, and he finds proportionally more sugar in human, and more casein in cow's milk, with less important variation in the fatty, saline, and animal elements. He also finds that the casein of human and that of cow's milk differs in its physical characteristics when acted upon by reagents, that of the cow forming a more tough, firm, indigestible curd.

Different analyses give variable results in all particulars, as might be expected, for it is apparent that the composition of any milk, human or animal, will be modified by the season of the year, the quality of the food and drink, the state of health, the time since parturition, individual and race peculiarities, and many other influences. Again, milk has certain volatile elements, and it may be polluted with septic germs or the infection agent of severe or deadly disease, which no art of the chemist can detect. So that whatever may be the results of analysis showing differences in the grosser constituents, they are not of sufficient practical importance from which to deduce the conclusion that it is dangerous to feed infants with undiluted cow's milk, and that they cannot be safely and successfully raised in this manner.

The power of the chemist ends with his destructive analysis. He can neither mix nor distill any fluid having the nature and physical characteristics of milk. The female is the only chemist who can prepare this invaluable food, elaborating it through processes secluded from observation in the laboratory of her mammary gland.

The artificial substitutes for human milk that have been mentioned have certainly been most thoroughly tried for many years, and the results have not been very flattering to the scientific acumen of the inventors. Thousands of helpless, beautiful children have been yearly starved to death, poisoned, and made sick by the use of these unsuitable, indigestible foods.

A consideration of some of the anatomical and physiological peculiarities of the digestive organs in infancy will aid us in the further discussion of this subject, for the scientific successful method of artificial alimentation must be in harmony with the facts of anatomy and physiology, and not rest on any other basis or theory however indorsed by eminent fathers in medicine.

At birth the child has no visible teeth. The salivary glands are small, weighing, as stated by the Drs. Jacobi of New York, "at the age of one month, thirty-four grains; at fifteen months, eighty grains; at two years, one hundred and eighty grains."

Their physiological function is the secretion of an alkaline lubricating fluid for assistance in deglutition, having power to convert amylaceous foods into grape sugar, or dextrose. These glands are so small at birth, and until the fourth or fifth month, that but little saliva can be secreted. After this age, while teething, it is often excessive.

The stomach is a simple dilatation of the alimentary canal, the curvatures of after life being absent. It easily rejects its surplus contents when overloaded, and saves the child from distress and sickness.

Its physiological function is the digestion of albuminoid or proteid foods by the solvent power of its secretions. Sugar, starch, and oil are not digested in the stomach. They pass into the duodenum with the chyme, and are digested by the secretions of the liver, pancreas, and intestinal glands.

In this connection we must mention the important anatomical fact, as stated by the Drs. Jacobi, "that the pancreas varies in weight in infants of the same age; that in infants under four months it is often less than a drachm, never weighing two drachms." If these are unquestioned facts, it is clearly evident that the infant has but feeble power to digest the starchy elements of farinaceous foods; and that decoctions or gruels, made from wheat, oats, barley, corn starch, arrow-root, and rice, which contain from sixty to eighty-six per cent. of starch, and are the basis of all commercial infant foods, should have a low place in an infant's diet, compared with cow's milk, which contains no starch, but has an abundance of all needed elements, and is almost perfectly adapted to the digestive organs of the child, the trouble being with the quality of the casein, and the liability to be acid instead of alkaline, like human milk.

"The investigations of Guillot into the change undergone by the food given to children in French hospitals, and the great mortality attending those who were fed on farinaceous and starchy substances boiled in water," is confirmatory on this point. "He found uniformly present in the bowels a jelly-like substance, which on analysis was found to be nearly pure starch." The children were starved to death.

If with care in the selection, management, and feeding of the cow, we can modify the milk product, and secure a food almost identical with, yes, infinitely nearer human milk than any artificial mixture can be, and if by some method of administration we can render it acceptable to the stomach, overcoming objections by good practical results, all of which we declare can be accomplished, ought we not, considering the enormous death-rates attending old methods, to take a new departure, and establish our practice on the only sound basis, the facts of anatomy and physiology? We can lose nothing in reputation. A larger mortality cannot be easily secured and placed to our credit!

Let then the physician and the physiological chemist, in dealing with this important matter, consult the great high priest of nature, the farmer, and, by his aid, using the chemistry of nature, secure an abundance of perfect natural food for our children, pure, sweet, rich cow's milk.

All theories and methods of administration to be accepted as fixed must successfully stand the great crucial test of science, that of observation and experience. What testimony then can we secure from observation and experience?

In 1868 Dr. Stephen Rodgers, of New York, published an article in the *Medical Record* recommending undiluted cow's milk for infants, after nine years' experience, and its use in bringing up three of his own children.

Dr. Hiram Corson, in an address before the State Medical Society of Pennsylvania, on food for infants, some fifteen years ago, after observations extending over a period of more than thirty years, declares: "I feel quite certain that it is almost as easy to raise children by hand, if they have an abundant supply of good, undiluted cow's milk, as it is by the breast."

His experience confirms his opinion "that thousands of children who die annually of diarrhœal diseases, die for want of food. They are really starved to death." He says to the profession, "and we are not blameless."

Dr. Austin Flint, in his work on the Practice of Medicine, article Cholera Infantum, page 417, says: "There is reason to believe that infantile mortality in cities is attributable in no small measure to the use of diluted, sophisticated, artificial milk. The importance of undiluted milk from a pure source to the welfare of children is far from being generally appreciated."

It was with great pleasure that I found, while preparing for this occasion, in the last, the April, number of the *American Journal of Obstetrics*, a "special report of the discussion on the question of nourishment in the pediatric section of the fifty-fourth meeting of German naturalists and physicians, at Salzburg, September 19, 1881."

A commission had been previously appointed to prepare papers and investigate this important subject. A circular was prepared and widely distributed, directing the discussion to two points:—

"First. Substitution of natural, unadulterated animal (cow's) milk for human milk, and its production.

"Second. Substitution of artificial foods, with or without milk, for the natural milk; their nature and value."

After earnest discussion for two days the conclusions reached in regard to artificial foods were expressed by Dr. Soltmann as follows: "Now and evermore it is unanimously agreed, that these preparations *can in no way be substituted for mother's milk, and as exclusive foods during the first year are to be entirely and completely rejected.*"

In regard to cow's milk he said: "Therefore we now stand at this point: cow's milk is the only substitute for mother's milk. Our whole endeavor must be to procure and use this in the best way. This standpoint is a long step in advance on the broad field of work before us." As presiding officer he closed the discussion thus: "Let us hold fast, gentlemen, to what we have already gained. Let us attempt in the future to put it in the power of even the poorest to obtain good, pure milk for his children. United work on the part of doctor, experimental pathologist, physiological chemist, and land-owner can alone fill up the gaps in our knowledge of dietetics."

For thirteen years, when for any cause it has been necessary to resort to other food than mother's milk, and the fears of mothers and nurses could be overcome, I have used undiluted cow's milk, and failed only in three instances to raise the child.

One was born in midsummer; the mother had no milk. The parents had previously raised a child with pure milk. They attempted to raise this with farrow cow's milk, which was unsuitable; vomiting and purging did its work in a few days. A midwife attended at its birth. I saw it once the day before it died. It was not fairly under my care.

Another was born April 22, 1874. The mother had convulsions, was delivered with forceps. The child was partially nursed for three weeks, and then weaned with undiluted milk. It was very feeble from birth, but did well for nearly three months; July 27th it died after a week's illness, caused by fevered bloody milk, which was not detected until the child was made sick. The cow was injured in the pasture, and the unhealthy putrid milk poisoned and killed the baby.

The third case occurred in August, 1881. The mother was confined while suffering from a severe attack of acute dysentery. She died in seven days. The child was sick from birth, its body emitting a sour, urinous, sickening odor, like that from the mother during her sickness. It lived twenty-four days.

A brief recital of a few severe test cases, to illustrate the views here presented, is important.

Case I. June 27. 1869, a daughter was born to Dwight E. Clement, of North Orange; nursed a month to July 30th, when the mother was prostrated with a severe typhoid fever. The milk "dried up," and grandmother, fearing "clear milk would kill the child," gave it one fourth milk with three fourths water. This was in the hot July. In a few days the child was sick with vomiting and purging. It rapidly failed, its flesh wasted, the anterior fontanelle was depressed. It uttered the peculiar plaintive moan we have all too often heard in similar cases. The hands dropped lifeless; the tongue lay on the floor of the open mouth; eyes half open; extremities cold; death imminent. Grandmother was ready to try anything. Undiluted milk was carefully administered.

The child is now a fine, healthy girl, thirteen years of age. This was my first case; it gave me confidence and courage.

Case II. September 2, 1872, a son was born to Hollon Farr, of Athol. It never nursed, and was fed on milk and water, and Graham gruel and milk, until it was nine months old, when it was prostrated with vomiting and purging. Clear milk was advised, and the boy is to-day a fine, healthy fellow, nine years old.

October 10, 1875, another son was born. The mother had no milk. When the yellow bile appeared in the discharges, undiluted milk was given, and the nurse, who was very timid, was instructed to let it have all it would take, after giving it a little cold water. I was called in two weeks. The child did not thrive; it worried, was weak and feeble, with a peculiar red blush on the skin. The nurse had left, and the mother said she had given it only a great spoonful of milk at a time. It was starved. We advised the mother, and the child soon had all it wanted, and is to-day a fine, healthy boy, six years old.

Now mark this: four out of six of their children died in infancy, of cholera infantum, fed on milk and water and farinaceous gruels and milk, before I became acquainted with the family.

Case III. July 23, 1876. A son was born to A. M. Sawyer, of Athol, after a hard labor, terminated with forceps; weight twelve pounds. Nine hours after the mother suddenly died. The child never nursed. It was fed with water and a little milk for two days, until the yellow bile appeared in the discharges and appetite was manifested, and the nurse was instructed to give it undiluted milk. Three weeks after, August 14th, I was called. It was vomiting and purging. The nurse, a good one, the same as employed by Mr. Farr, was timid, and had added one fourth water. The child was cheated twice, first by the milkman, who supplied the milk from that of several cows mixed, instead of from one as he had agreed to do, and that was evidently extended with water. Second, the nurse added more water. Milk was obtained twice a day from a young healthy cow that had recently calved. It was carefully fed pure, a little medicine and brandy administered, and we had no further trouble. It is now six years old.

A child of E. A. Thomas was brought up on milk from the same cow at the same time.

CASE IV. May 2, 1867. A son was born to O. T. Brooks, of Athol. In six weeks the mother's milk failed from debility and "nursing sore mouth," and the child was weaned with one third milk and two thirds water. As usual the food disagreed; it irritated and poisoned the child; vomiting and purging finished its work August 30th, and a beautiful child passed away, aged four months.

December 6, 1871. Twin boys were born. At eight weeks they were weaned for the same cause, in the same manner as before. They lived, pale, ill-nourished and weak, until August, 1873, when the inevitable "vomiting and purging," made quick work with its victims, and the two dear children were laid away, aged one year and eight months.

October 26, 1875, a daughter was born. In two months was weaned, as the others were. The old enemy, vomiting and purging, tried for a few weeks to do the work which in midsummer it would quickly and easily accomplish. At length the fearful, reluctant mother consented to use undiluted milk, and in a few days the child was well, and is to-day a robust, healthy, beautiful girl, seven years old.

A son was born August 3, 1879. Was weaned in hot weather on undiluted cow's milk, without trouble, and is now a tough, strong boy, nearly three years old.

I have no record of the number of cases weaned and raised on undiluted cow's milk, probably nearly a hundred, as my obstetrical cases at full term, for the thirteen years, number five hundred and twenty; and I fully agree with Dr. Corson, "that it is about as easy to raise children by hand, if we have an abundant supply of good, undiluted cow's milk, as it is by the breast," and I will further add that under these conditions I neither hesitate or fear to wean in hot weather. Success with any plan of management can only be secured by attention to a multitude of seemingly unimportant details. The child seeks the breast to satisfy its thirst and appetite, and for no other purpose. It draws the warm milk slowly, with much effort, from the mother's breast. As it reaches the palate the gastric glands are excited, the digestive fluids are freely secreted, and mixing with the inflowing milk exert their solvent power on the whole bulk of ingesta with great energy. Therefore it is good practice, especially in hot weather, to offer the child cold water before nursing to satisfy its thirst, and prevent it from overloading its stomach.

In artificial feeding we should carefully observe the methods, and follow the indications of nature. Therefore we would satisfy the infant's thirst by allowing it to draw water from a tumbler slowly through the nurse tube; some children will require considerable, others but little. Not being an aliment it does not excite the secretion of the gastric juices. Then in a few moments allow the child *all the fresh, undiluted cow's milk it will take*, warmed to the temperature of the blood, only being sure that it is slowly ingested, just as nature supplies it when nursed from the mother's breast.

Some will ask, Why not mix the water and milk in the bottle instead of the stomach? What is the difference in result?

Milk and water is neither the one nor the other. It is extended, adulterated, weakened milk, and when thus administered more bulk is required for a given amount of nourishment, the stomach is over-distended, and the gastric juice so diluted as to weaken its digestive power; besides, the water and milk separately administered mix but little in the stomach, the water is so rapidly absorbed. By this method we do closely imitate nature, and in a great measure, yes, almost entirely overcome the difference in quality and digestibility of the casein between human and cow's milk.

The cow should be selected with great care. Milk from different breeds, and from cows of the same breed vary widely in their essential elements. That from the Jerseys and Alderneys is excessively rich in cream. The Ayrshire and grade cow should be preferred, as they furnish a fluid more nearly resembling human milk. A very fat baby is not to be desired. The quality of milk is influenced by the season of the year, the food, air, water, and care which the cow receives, and the state of her health. For obvious reasons we would avoid a diseased, old, or farrow cow, one fed on turnips, onions, cabbage, slops, garbage, and coarse, sour, swamp grasses, supplied with water from a stagnant pool or polluted well, or kept in a damp, filthy, ill-ventilated stable, and select a young, healthy Ayrshire or grade cow, that has recently had a calf; one that has good, sweet, upland pasturage, with pure spring water to drink, and a plenty of salt; one that is sheltered in a clean, well-ventilated stable; one that has good care, that is kept quiet and gentle, not worried by dogs or boys. We would examine the milk with a test tube, note its specific gravity, its color, smell, and taste, the percentage of cream, its reaction to test paper, and if acid reject it. We must use our eyes, our nose, our taste, and secure pure, rich milk, milked morning and evening from a clean cow, into a clean pail; keep it in a clean bowl, covered with a clean napkin, in a clean closet, away from the pantry where food is stored. It will rapidly absorb odors, dust, and septic germs, and in hot weather will quickly ferment, putrefy, and spoil unless cared for, and thus become the vehicle or cause of severe or perhaps deadly disease. It is the most sensitive and easily spoiled of all animal foods.

Having secured good milk we would procure a suitable nurse tube and bottle; one with a screw in the stopper is desirable to regulate the flow. We must be sure that the child draws the milk slowly, just as in nursing, for if poured into the stomach faster than the gastric juices can be secreted to mix with it, it may form a hard mass of curd, distress the child, and perhaps cause a convulsion.

The nurse tube and bottle should be kept scrupulously clean and sweet by rinsing in weak soda water immediately after using. Perhaps, after all our care, the milk may not be acceptable to the delicate stomach; then render it more alkaline by adding a suitable quantity of bicarbonate of soda or potassa or the phosphate of soda, or try the milk of another cow. The trouble may be due to bacteria or microdemes; then sterilize the milk as advised by Tyndall, by subjecting it to a heat of 150° F. for a few minutes.

I never boil milk for a child; it changes its specific gravity and other characteristics. Salt should not be forgotten.

We cannot manage all children by one precise rule. Rules and methods must be elastic, and varied to meet individual idiosyncrasies and peculiar conditions.

That many children have been successfully raised on milk and water, mixed and other foods, we freely admit. They often look plump and well nourished, but how quickly their flesh wastes under a slight illness! Their tissues lack firmness and stamina; they lack endurance, and if much sick in hot weather are about sure to die, while breast-fed and pure milk raised children bear disease and dentition equally well; cholera infantum rarely attacks them.

The Registration Reports record the fact, which is confirmed by our observation and experience, that of all the causes of infantile sickness and mortality that of defective alimentation is the most important. Diseases of the digestive organs from this cause, when intensified by other unavoidable conditions, like hereditary tendencies, dentition, and solar heat, are not readily controlled by medicine. They are best treated by prevention. The resources of preventive medicine are of incalculable value to mankind. Can the worth of vaccination be estimated, or the immortal Jenner be forgotten? The power of the great anæsthetic to prevent pain, and save life, which was first demonstrated to a startled world in yonder hospital, by skillful surgeons of the Massachusetts Medical Society, will continue to bless all future generations.

In the late war the able and energetic General Butler, aided by his medical staff, through wise measures of prevention, in transferring his command to his successor, was able to declare to the people of New Orleans that he had demonstrated that the yellow fever could be kept from their borders, — a peaceful victory, of more value to this country than a successful battle.

We cannot have forgotten the epidemic of small-pox that so disturbed and alarmed the people a few years ago. Boston suffered not only from the loathsome pestilence, and its mortality, but in every branch of her industry and trade. Conceited, incompetent men controlled the most important department of administration, that of the Public Health, and the disease marched on unchecked. But when intelligent, competent Commissioners were appointed, and clothed with authority, one of whom, a respected Fellow of our Society, now His Honor, the mayor of this city — Dr. Samuel A. Green — the power of preventive medicine, wisely employed, checked the pestilence, the public health was restored, confidence and prosperity returned to this beautiful city, and the results were brilliant!

If that "perpetual and unrelenting sourge," typhoid fever, can be eradicated by preventive measures, as claimed by Dr. Parkes, Dr. Budd, and many English and German physicians, and, as very ably and suggestively discussed by Dr. Thomas H. Gage in this place two years ago, what a dark shadow of suffering and death would be dissipated! The comfort, happiness and security of human life would be greatly increased; the prosperity and welfare of society immeasurably promoted, and scientific medicine would achieve imperishable laurels.

If in the department of infantile therapeutics preventive methods can be so employed as to check the ravages of these diseases that rob our homes of our brightest jewels, will not the results be most brilliant and of incalculable value to society? To the accomplishment of this high purpose the profession should direct its investigations; and although we may be modest, obscure physicians, we can aid in this work, through associated effort, in our district medical societies, by imparting to each other our opinions derived from investigation, observation, and experience.

The crowning glory of our profession is its broad, practical humanity, that reaches with its ministrations the sick poor, provides care in asylums for the insane, the blind, the outcast, the inebriate, the consumptive, the feeble-minded, and even the nervous.

No adequate provisions have been made for the safety and welfare of the helpless infant. Our profession should encourage the generous philanthropy of wealthy men like Thomas Wilson, of Baltimore, who, dying in 1879, left a bequest of $500,000 "for the purpose of securing a summer retreat for sick children, from the heat and unhealthfulness of the city." His will says: "Having observed for many years the great and alarming mortality which occurs each summer among young children, . . . I do not think I can make a better use of some of the means of which God has made me steward than in the alleviation of the pains and prolongation of the lives of these little children." One hundred and sixty acres of land six hundred feet above tide water have been secured, a half hour's ride from the city of Baltimore, and the Wilson Sanitarium started in its beneficent work, dealing only with the poorer classes, without pay.

It is pleasant to notice that in our State similar institutions are being established, though on a small scale, with insufficient equipment: one, the Seashore Home at Winthrop; another, the Children's Hospital at Baldwinville. If generous benefactions could be secured for their maintenance and extension, and the mothers among the poor of large cities, living under unfavorable sanitary conditions, could receive, with their children, assistance and care during the hot months, very much would be accomplished towards preventing this excessive infantile mortality.

May we not reasonably hope that in the near future some member of our Massachusetts Medical Society, having the kind heart and executive ability of our late associate, Dr. Samuel Gridley Howe, will engage in this work, and accomplish for helpless infancy that measure of relief which he secured for the blind and feeble-minded; and that from the ranks of business some man with princely wealth, generous, humane, philanthropic, with the heart of a George Peabody, influenced by the spirit and example of the Great Nazarene, "who took little children up in his arms, put his hands upon them, and blessed them," who will establish a beneficent charity, after the example of Thomas Wilson, that will relieve poor children in their homes by furnishing an abundant supply of pure milk, ice, and other comforts, or provide for them good care in a well-regulated asylum.

This subject is so important, so far reaching, so intricate a problem, so interwoven with the welfare and foundations of human society, that its discussion kindles enthusiasm, and I am reluctant to leave the duty of this hour so partially and imperfectly performed.

Anxious fathers and mothers are seeking our aid, in our respective places of duty, to save their children from death! May we so wisely, tenderly, and successfully discharge our responsible duties as to deserve and receive the gratitude of parental hearts and the blessing of Almighty God!

◆

PANCREATIC APOPLEXY, WITH A REPORT OF TWO CASES.[1]

BY MORTON PRINCE, M. D.

II. *Subacute form.* — Of this we have nine cases. The general course of an attack may be described as follows: In the majority of cases the patient has been subject at varying intervals to attacks of illness referable to the digestive organs. The symptoms complained of at these times are such as usually accompany disturbances of digestion; such as palpitation of the heart, depression of spirits, burning and uncomfortable feeling in the pit of the stomach, indigestion, heartburn, etc. In other cases they may be more severe, accompanied with colicky pain, "cramps," vomiting, and diarrhœa. In one case (Hooper) the patient had suffered two or three times a fortnight for some years from "bilious attacks;" other attacks in this patient consisted of vomiting of yellowish or greenish fluids, occasionally food. In another case (Loeschner) the attacks followed excesses at intervals during five years. They consisted of symptoms of indigestion, burning feeling in the upper part of the abdomen, belching heart-burn, colic, and frequent diarrhœa. In Homan's case the patient, besides having had colic, had been ill about one year previously with "jaundice." He described himself as being at this time yellow, with some epigastric pain, and disinclination to move, but most of the time he was able to attend to his business.

These attacks may have occurred at intervals during several years, or only during the previous few months.

In other cases again there is complete absence of any such history. The patient, who has previously been perfectly well, is suddenly taken with the illness which terminates his life. In almost every case the unfortunate, whether previously liable to such attacks as above described or not, is suddenly, while in good health, seized with severe pain in the abdomen. When the hæmorrhage occurs the patient may be quietly resting or pursuing his usual occupation. The pain which ushers in the attack is usually very severe, and located in the upper part of the abdomen. It steadily increases in severity, is sharp or perhaps colicky in character. It is almost from the first accompanied by nausea and vomiting; the latter becomes frequent and obstinate, but gives no relief to the pain. The patient soon becomes anxious, restless, and depressed; he tosses about, and only with difficulty can be restrained in bed. The surface is cold, and the forehead covered with a cold sweat. The pulse is weak, rapid, and sooner or later imperceptible. The abdomen becomes tender, the tenderness being located in the upper part of the abdomen or epigastrium. In some cases the tenderness is such as to prevent an accurate examination. Tympanites is sometimes marked. The temperature in most cases is either normal or below normal. The bowels are apt to be constipated.

These symptoms continue without relief; those which are most striking being the pain, vomiting, anxiousness, restlessness, and the state of collapse into which the patient soon falls. If reaction does not set in, the symptoms increase in severity, and death occurs with sudden collapse at the end of from thirty-six to forty-eight hours. Other cases pursue a more protracted course. The symptoms are more moderate, and life may be prolonged for four or five days, when death takes place. Sometimes there is an abatement of the symptoms, and an improvement in the general condition. There soon appear, however, symptoms of general peritonitis to which the patient finally succumbs at the end of from fifteen to twenty days.

Rarely the attack differs from the description just given in a more gradual appearance of the symptoms. In this form the patient who has formerly suffered at times from colic is attacked with what appears at first to be a similar condition. Instead, however, of recovery taking place, the attacks are repeated, and the pains recur with increased frequency and severity, sometimes during several days, until finally the pain becomes constant, and the condition described above is then presented.

The above is a general picture of the disease, but there are a few particulars which it will be well to consider in detail.

The number after each heading indicates the number of cases in which the symptom or other particular was noted.

Previous history (12). — In six cases the patients had always previously been free from illness, although this fact is only to be inferred from the reports in some instances. Four of these six cases were of the "apoplectic" form, death occurring suddenly. In seven cases there had been a history of attacks of some kind occurring at intervals and extending over a varying period of time, from some months to several years. These attacks were always referable to the digestive organs, and in character such as has already been described above. What relation, if any, these attacks bear to the one that finally ends the life of the patient, is a question, which, with our present knowledge, cannot be determined. That there is, however, some connection seems probable from the fact, that at least in more than one half the cases some such history is found, a frequency which seems to indicate something more than coincidence. Furthermore, at the autopsy in one case (Hooper), the appearance of the pancreas was such as to lead the examiner (Beale) to believe that successive capillary hæmorrhages had occurred. In another case the patient, some months previously, had been "jaundiced" for over two months, besides at other times having had colic. Now, jaundice is usually looked upon as one of the symptoms of pancreatic disease, and it is possible it may have had such a pathology in this case. Another patient had passed a gallstone fifteen years previous to her fatal illness. A remarkable case (to be referred to later on) has been reported by H. Chiari, in which the pancreas sloughed, and was passed from the bowels. During the attack eighteen gall-stones were passed in the stools. In the light of these cases it may be questioned whether the hæmorrhage may not in some cases at least be dependent upon the pancreatic duct being obstructed by a gall-stone (or pancreatic calculus) becoming impacted in the duct common to it and the ductus communis choledocus. In this way the pancreatic secretion would be retained, and might exert some corrosive action upon the walls of the vessels.

---

[1] Concluded from page 32.

Onset of attack (12). — In ten cases the patient was *suddenly* attacked while perfectly well, the symptoms being from the outset of an alarming character. In two cases, on the other hand, the symptoms came on more *gradually*, requiring some time to culminate.

Initial symptoms (10). — Pain in the upper part of the abdomen is the first symptom to herald an attack. It was absent in only one case, and in this death occurred in a few minutes. The only symptoms complained of were a feeling of being unwell and an inclination to vomit. At other times the pain at first is less decided in character, appearing rather as a feeling of distress and fullness. Obstinate nausea and vomiting soon follow, and the patient, in the course of a few hours, falls into a state of collapse. From the outset anxiousness and restlessness on the part of the patient are strikingly prominent.

The *pain* (10) is almost always located in the epigastrium. In one case the patient described it as being below the left breast. In other cases it is stated simply to be in the abdomen. The pain is always severe and rebellious to treatment, morphia sometimes having little effect over it. In character it differs somewhat, even varying at different times in the same case. Sometimes it is described as colicky; it may be piercing or burning; it is generally constant with exacerbations. It is usually a fixed pain in the upper part of the abdomen, and does not appear to shoot into the shoulder, as has been stated. In only one case did this occur, and in this case it is described as being at first colicky, then, later, burning and piercing in the upper part of the abdomen; sometimes griping, shooting to the right towards the duodenum, to the left towards the spleen, downwards towards the umbilicus, backwards and to the right towards the shoulder.

Tenderness (7) is often a prominent symptom, and, like the pain, is located in the epigastrium, except in those cases where secondary peritonitis is developed, and then it becomes diffused over the abdomen. Sometimes this symptom is so marked as to prevent an accurate examination.

Nausea and vomiting (10) are distressing symptoms, and usually present from the first. In one case only does vomiting seem to have been totally absent, and in this it may have been controlled by the large doses of morphia given. Though in some cases the act of vomiting is not complete, in most cases it is constant, excessive, and not connected with the ingestion of food. Usually there is nothing characteristic about the vomitus, but in one case it is described as black matter. If diffuse suppurative inflammation occurs towards the end of the illness with perforation of the duodenum, as occurred in one case, the dark, foul-smelling fluid which escapes into the intestine and stomach may be vomited.

The *pulse* (5) becomes early increased in rapidity, and weak; later, almost imperceptible at the wrist as collapse sets in.

The number of cases in which the *temperature* is positively stated, or in which it can be inferred from the symptoms, is nine. In the remaining five cases death occurred suddenly. Of these nine cases in five the temperature was either normal or below normal. In one there was said to be "slight fever," but this was probably due to secondary inflammation, as it is not stated at what time in the course of the attack, which lasted in all twenty days, the temperature was taken. In two cases fever is noted or is to be inferred, but in both these peritonitis was present, and in the remaining case the fever is said to have been "high." In this case, however, the report is very incomplete both as respects the clinical history and the autopsy. It may be stated then that the temperature is not elevated unless secondary complications arise.

Tympanites was present in five cases, absent in two, and not noted in two. It thus occurs in more than one half the cases in which life is prolonged.

The *skin* (6), especially of the extremities, is usually cold, and covered with a cold sweat.

Bowels (7). — Constipation seems to be the rule in the early stages before peritonitis appears. In one case diarrhœa was noted, but was probably the result of large doses of calomel which were given.

Duration. — In some cases life may be prolonged for twenty days. In these cases there seems to be a recovery from the primary lesion, and death results from secondary inflammation.

Pathology. — The cause of the hæmorrhage like much else still remains obscure. In four cases, all very fat subjects, there was extensive fatty degeneration of the pancreas, while in the remaining cases either it did not exist or was not noted. But this condition does not of itself seem to be a sufficient explanation; for however plausible it may seem that, owing to such degeneration, the vessels, supposing them to be implicated, should give way in one or two places, it does not appear probable that they would do so all at once throughout the whole organ, as is frequently the case; nor would it account for the hæmorrhage into the neighboring connective tissue which was found in nine out of eleven cases. Some such theory as that suggested by Klebs seems more probable. He considers that the cause is to be found in the secreting portion of the pancreas, possibly in the corroding action of the juice. When we consider how peculiar is this lesion, how unparalleled it is in other organs of the body, and when with this we look at the structure, and the physiological function of the pancreas, with its power of digesting albuminous substances, this certainly seems to be the direction in which we should look for an explanation. What conditions, however, are necessary for such an action of the pancreatic juice are unknown. It may be questioned whether the hæmorrhage may not in some cases, at least, be due to a preceding acute pancreatitis. In one case excessive tobacco smoking has been assigned as the cause (Loeschner).* Occupation does not seem to have any influence. The subjects of eight cases are described as fat; five muscular, or robust; and five are said to have been intemperate. No note in two.

Prognosis. — As this condition has never been diagnosed during life, it is impossible to say whether or not recovery may take place. It may be that cases ending favorably have occurred which have not been recognized. Two cases reported by Chiari, in both of which the pancreas sloughed and was passed by the rectum, and which, though not included here among the above collected cases, may or may not be examples of this affection, are at any rate of interest as showing the possibility of a favorable termination. The first was a case which occurred in the practice of Dr. Trafoyer. It was that of a wine merchant, fifty-two years old, who, on July 9, 1862, was attacked, while on a journey, with colic. The attack was so severe that he had to be taken home in a wagon, arriving in a very weak condition. The patient, a very strong and robust man, stated that he had suffered for two months from indigestion, and that in this time he had lost a marked amount of flesh. Biliary colic was diagnosed. The attacks of colic recurred at intervals of several days with increasing severity. After one attack of remarkable severity, eighteen gall-stones, the largest the size of a pea, were found in the stools. Three days later so severe an attack with vomiting came on that a fatal issue was feared. But the attack passed off, and four days later still, *a discolored mass of tissue was passed from the bowels*. This was recognized by Rokitansky *as the sloughed pancreas*. From this time on the patient improved, and in three weeks was completely well.

At the time of writing he was sixty-nine years old and in perfect health.

The second case was a man thirty-eight years old, who had previously, in the year 1878, suffered with the symptoms of the passage of gall-stones. He recovered and remained well till September of the same year, when he suffered from pain in the abdomen. The pain though continuous did not prevent him from continuing at his business. At the end of ten days (September 28th) it suddenly increased in severity, becoming intense and of a colicky character; obstinate vomiting supervened, and the symptoms resembled those of intestinal obstruction. The principal symptoms were pain in the region of the stomach, vomiting, constipation, increased respiration, feeble pulse, cold skin, profuse perspiration, anxious countenance, tenderness over stomach. These passed away, however, but only to return again at the end of two days (October 4th). Improvement again set in and continued until October 20th, when high fever came on, together with similar symptoms of obstruction, and continued for three days at 104.8° F. These symptoms again disappeared, and continued to thus intermit till November 7th, when *there was passed from the bowels a piece of tissue which proved to be the greater part of the pancreas in a state of extreme gangrene.*

From this time the patient made a good recovery.

One of the most interesting questions connected with this subject is the *cause of death* in those cases which have ended suddenly in an apoplectiform manner. The hæmorrhage of itself is not sufficient in quantity to be fatal, or to cause the alarming collapse observed in more protracted cases. Zenker, who noticed venous congestion of the semilunar ganglion without alteration of the ganglion cells or nerve fibres in two of his cases — the only ones in which these bodies have been examined — draws attention to the similarity between these cases of sudden death and those of shock following severe mechanical violence inflicted on the abdomen, and thinks both resembles Goltz experiment of tapping on the abdomen of the frog, and that death is due to reflex paralysis of the heart through the semilunar ganglion. Friedreich considers that there is a marked difference between these cases and that of Goltz' frog, in that there is complete absence of congestion of the abdominal viscera observed in the tapping experiment, and attributed the sudden death to reflex paralysis of the heart due to pressure upon the semilunar ganglion from the suddenly enlarged pancreas. Both, however, look to a reflex paralysis of the heart through this body. To my mind a fatal objection to the pressure theory lies in the fact, that other and larger tumors, though to be sure of more gradual growth, but placed so as to exert a similar influence, are known to occur in the abdomen without any such ill consequence. Furthermore, the inadequacy of this explanation is shown by Draper's first case, where death suddenly occurred at the end of forty to forty-five minutes, where no enlargement of the pancreas was found, notwithstanding the hæmorrhage.

In regard to the congestion theory, it is necessary to examine the semilunar ganglia in a larger number of cases before accepting such an hypothesis.

I am inclined to the opinion that the best explanation is to be found in the condition known as *shock*, using this term to denote a sudden and profound depression or inhibition of the nervous centres, as a reflex result of so sudden and extensive injury of the pancreas itself, without requiring the mediation of the semilunar ganglion.

This view receives some support from the fact that we find cases of all grades: from those where death is nearly instantaneous, to others where it is delayed several days, and in which the condition of "shock" is established at equally varying periods. In the latter class of cases there may be a recovery from the shock, but final death from peritonitis. This state of collapse or shock, which sooner or later appears, is similar to that which is common to any of the more violent diseases of the abdominal organs (such as nephritic colic, strangulation of the intestine, wounds, etc.), and which is brought about through reflex depression of the nervous centres depending upon neural disturbances originating directly in the organs involved. When death is sudden the reflex disturbance is more acute and profound than when it is delayed.

Dr. W. F. Whitney, in a paper[1] read before this Section, rejects the theory that death is due to loss of blood, and suggests that "it is much easier to conceive of it [the hæmorrhage] as the accompaniment of some lesion, as yet overlooked, of the central nervous system, and standing in the same relation to this that the subserous ecchymoses and pulmonary extravasations do to injuries of the head; or else consider with Zenker that it is the cause of profound changes in the nervous centres through reflex action of the sympathetic. This explanation I can only regard in the same spirit in which I believe it was offered, namely, as one of the possibilities which it would be well to look into.

◆

"PHONIC PARALYSIS," WITH RAPID RESPIRATION.

BY ROBERT M. LAWRENCE, M. D.

THE following paper was suggested by a case of which I have prepared a brief account, to which has been added a synopsis of an analogous case. I have endeavored to make partial amends for my own limited observation by a somewhat extended study of the literature of the subject. The term "Phonic Paralysis" or "Palsy" is used by Tobold, and has at least the merit of being comprehensive. It is applicable to all cases where there is loss of voice due to paralysis, however caused, of the adductor muscles of the larynx, as in functional, nervous, intermittent, and hysterical aphonia, and also paralytic dysphonia. It is that variety of glottic palsy where the movements of the glottis are not wholly suppressed, but in which there is observed an incomplete or only a momentary closure, and where, in consequence of faulty innervation of the laryngeal muscles, the vibration of the vocal cords either entirely fails or is insufficient to produce a voice sound in spite of the efforts of the patient. The affection presents different forms.

Case I. Sarah McC., aged twenty-three years, of American birth, tall and of spare figure, had had a fair degree of health until the spring of 1878, when she became much debilitated owing to overwork. As the oldest of several children, a large share of household work devolved upon her, whereby her strength was unduly taxed. There was no previous history of syphilis or rheumatism. At the time above mentioned her menses, previously regular, ceased, and have not since reappeared. Three months later her voice suddenly failed. She could no longer speak aloud, but only in a husky whisper. She was seen by me in April, 1880. At this time, besides the aphonia, there was dyspnœa of a peculiar type. The respiratory rhythm was very much accelerated, and so continued; the number of respirations being from 60 to 70 in a minute and somewhat jerking, noisy, and irregular. Pulse 80, regular and alike at each wrist. Countenance anxious. Appetite poor. Bowels regular. No pain or soreness in the chest. This was the condition of things up to the spring of 1881, when I lost sight of the case. I shall ask your attention later to the character of the respiration.

There was a slight cough and expectoration. No pain in the region of the larnyx. For two years previous, rest in the recumbent position had been impossible on account of the dyspnœa. Two or three hours' sleep were obtained at night in an arm-chair. Sometimes, and especially in summer, it has been necessary to carry her out into the open air, on account of threatening asphyxia. Repeated examinations of the chest have failed to reveal any signs of pulmonary or cardiac lesions, nothing indeed except varying bronchitic râles.

Laryngoscopic examination demonstrated that there was no induration or inflammation of the vocal cords or adjacent parts, nor any signs of chronic laryngitis.

On the patient's attempting phonation the cords approximate but slightly, the left cord being stationary, the right one moving sluggishly, thus indicating paralysis of the lateral crico-arytenoid and arytenoideus muscles. . . . The above is a brief sketch of the history and average condition of the patient during the past three years.

In this period she has on several occasions suddenly regained her voice and as abruptly lost it after intervals of from two to six days. The treatment of this case consisted chiefly in the administration of tonics and emmenagogues.

Faradization was applied to the vocal cords and externally to the thyroid cartilage, on several occasions, but without marked benefit.

Case II. Naveatil[1] relates the case of a middle-aged man who complained of dyspnœa upon the least exertion. At night also his breathing was often embarrassed, and he was forced to sit up in bed on this account. Inspection of the mouth and pharynx revealed nothing abnormal, but laryngoscopic examination, showed the right vocal cord to be stationary in the middle line of the glottis, immovable during respiration, and also during attempts at phonation and laughter. The left cord moved sluggishly, and marked hoarseness, amounting almost to aphonia, was the result. The laryngeal mucous membrane was everywhere reddened and thickened. Auscultation and percussion of the chest gave absolutely normal results, evidences of trivial catarrh excepted. There was a slight cough. How could the existing phonic palsy in this case be accounted for? It might be a local rheumatic affection, for there were no signs indicating pressure on the vagus or recurrent nerves. A coincident laryngeal catarrh seemed to confirm this theory. In spite of treatment the patient grew worse, began to expectorate pus and blood, and was seized with a fatal attack of asphyxia. The autopsy showed that the air-passages had been perforated by a large posterior mediastinal abscess; thus explaining the perplexing incongruity between the subjective symptoms, namely, the feeling of oppression on the chest, with dyspnœa, and the absence, during life, of explanatory phyical signs.

Niemeyer, in commenting on thes fact that mental emotions are proverbially influential in the causation and cure of hysterical aphonia, is of the opinion that the origin of the affection is to be attributed to that part of the brain where the more complex mental operations are performed; on the contrary, it is quite improbable that it is ever due to a derangement of nutrition in the motor centres. He prefers the title "Psychical Palsy," in contradistinction to the centric or peripheral varieties. Occasionally, however, the affection may arise from disease of the cerebral substance or from a lesion of the cervical portion of the spinal cord. Exactly what part of the brain must be affected by pathological processes in order to give rise to a disturbance of the vocal function, has not yet been determined with precision. It is probably the region of the fourth ventricle.

Persistent laryngeal catarrh is not unfrequently a cause of phonic palsy, as is also the inspiration of intensely cold air, and likewise excessive straining of the voice in singing. Hence auctioneers and hawkers are subject to it. The affection may arise in consequence of pressure either of morbid growths in the neck and mediastinum, or of enlarged lymphatic glands, especially those which lie along the course of the recurrent nerve. It may also be due to inflammatory processes in the neck or to traumatic influences. Other causes are poisoning by lead, arsenic, atropia, hyoscyamus, stramonium, or ergot. It may be a reflex manifestation due to irritation of the intestine by worms, and last, but not least, to disorders of the uterine system. Irregularity in the menstrual function, delicacy of constitution, excitability of temperament; these are conditions which predispose to the affection. To quote from Ziemssen[2]: "Menstrual disturbances occur in many hysterical women, without its being always possible to state in how far they precede or cause the disease, as an independent functional disturbance, or whether they are merely to be regarded as a symptom and consequence of it. Increased vascular fullness, and irregularities of the circulation caused by a suppression of the menses, can influence the nervous system in a similar manner."

Aphonia may also occur as a sequela of typhus, diphtheria, or croup. Often the notable pallor of the laryngeal mucous membrane sufficiently indicates the diminished irritation of the nervous filaments and the inadequate motor innervation caused thereby. Malarious agencies may be an important factor in some cases. Flint asserts that loss of voice may be caused by paralysis of the spinal accessory nerve, which is the nerve of phonation. Gerhardt,[1] in speaking of vocal palsy, caused by tuberculosis invading the apices of the lungs, says, that of fifty-two patients with tuberculosis, where the *right* pulmonary apex was affected, fifty were hoarse. And of thirty-two in whom the *left* apex was affected only *one* was hoarse. He describes three forms of the affection, of rheumatic origin, namely: First. Meta-rheumatic vocal paralysis, following acute articular rheumatism. Second. A catarrhal rheumatic variety, which may occur in connection with laryngeal catarrh, and may persist after the latter has subsided. Third, direct rheumatic vocal paralysis, which is comparatively rare. Friedrich[2] relates a case where bilateral vocal palsy was due to the appearance of trichinæ in the laryngeal muscles. Lastly, Naveatil mentions syphilitic periostoses, circumscribed indurations or softening of the cerebral substance, as causes of the affection.

---

[1] Berliner klin. Wochenschrift, 1869.

[2] Encyclop., vol. iv., page 484.

With the aid of the laryngoscope, the *diagnosis* of the ordinary forms of phonic palsy is usually easy. Some writers distinguish between a *true* paralysis of the cords, giving rise to a so-called functional aphonia, and a *false* paralysis, meaning thereby hysterical aphonia. In order to ascertain which of these conditions is present, the following method has been suggested. Having placed the small mirror in position, the patient is told to cough. Should the case be one of true paralysis, the cords will remain immovable. If false paralysis, they will approach the median line.

On the other hand, Bosworth[3] says: "Hysterical aphonia is a *true* paralysis for which the sufferer is not directly responsible, and although it has much resemblance to a counterfeit affection, it cannot be controlled by the patient. It is always bilateral and assumes the form of incomplete closure of the glottis." Flint[4] remarks that in aphonia from paralysis, which is functional, there is simply a weak, but not a husky, voice; or a soft, easily produced whisper. If the trouble be due to laryngitis, on the other hand, or to morbid growths, there is either a harsh whisper produced with considerable effort or there is huskiness.

In certain rare cases, we may have derangements of the respiratory function as a complication, of which neither the rational nor the physical signs afford a satisfactory explanation. In Case I. there was at first sight much resemblance to asthma. But this theory was excluded on further examination, for the dyspnœa was constant, not paroxysmal, and, moreover, both inspiration and expiration were abnormally shortened, whereas the reverse is ordinarily true in asthma. Again, aortic aneurism was thought of, or the possible presence of an intra-thoracic tumor pressing on the recurrent laryngeal nerve or on the air-passages, but neither of these theories was supported by any confirmatory physical signs on examination of the chest, and, moreover, the paralysis was bilateral. That the dyspnœa was not of cardiac origin is obvious from the fact that exercise did not especially aggravate it; and auscultation confirmed this view. Failing to obtain in the thorax any sign which could aid in accounting for the dyspnœa, the cervical region was carefully examined. Could the presence of a tumor or enlarged gland in *that* region affect in any way the respiratory rhythm? But this too yielded negative results.

We have then here a case of functional aphonia, due either to hysteria, debility, anæmia, or to menstrual suppression, and indicated by a paralysis of the adductor muscles of the vocal cords. Such cases are frequently met with. But how is it possible to account for the permanent rapidity of the breathing in our case? On this point I have not been able to find a ready and perfectly satisfactory explanation. A *temporary* acceleration of the respiratory rhythm is sometimes observed in hysteria. With a pulse at or about the normal figure, the respirations may reach 70 or 80 in a minute, and may thus continue for a short time. Dr. S. Weir Mitchell[5] says: "In other forms of disease, when the breathing becomes rapid, the pulse rate is proportionately increased, but hysteria breaks all laws except its own rules of eccentricity. Where the respiratory rhythm is very rapid, and the pulse about normal, we have a "clinical curiosity" except it be owing to hysteria. In hysterical subjects, however, rapid breathing may accompany cardiac derangements, which is uncommon, or may exist alone, the pulse being unaffected."

It seems to me that the most plausible theory of this unusual case (for I have in vain sought for the record of a parallel one) is that a localized hysteria was the cause of the two prominent symptoms, namely, the aphonia, which is not uncommon, and the permanently rapid breathing, which is exceedingly rare. Leaving now this latter feature, I will speak briefly of the prognosis, and lastly of the treatment of phonic palsy.

In cases where the loss of voice has been occasioned by exposure to cold, and which are usually of a catarrhal nature, the outlook is favorable. The same is true of cases of aphonia occurring in hysterical subjects, of those which are a reflex manifestation of uterine disorder, and of the sequelæ of diphtheria and croup. Somewhat less favorable is the prognosis in that form of the affection due to habitual over-straining of the voice. According to Naveatil local rheumatic palsies of the vocal cords often disappear spontaneously. If persistent, however, the muscles lose their contractility and become atonic. They may even undergo fatty degeneration. Least amenable to treatment is that form associated with cerebral or spinal lesions.

In many cases of nervous aphonia the simple introduction of a sound, with which the cords are incidentally touched; has sufficed to restore the voice, temporarily at least, and it is a peculiarity of that form of the affection due to hysteria, that while certain cases seem to resist obstinately the most energetic treatment, others yield to the simple contact of the laryngeal mirror. A spontaneous cure is not rare, and of especial efficacy are those influences which act on the mind of the patient.

It is related that at the time when homœopathy was most flourishing in France, Trousseau and Tourand cured several cases by means of marshmallow pills, the patients supposing that they were being treated after the most approved homœopathic style.

Dr. H. K. Oliver[6] has proposed a method of treatment by external manipulation of the larynx, which is now mentioned by most writers on the subject. Briefly, this consists in the compression of the alæ of the thyroid cartilage in their posterior and upper part by the thumb and forefinger. The patient is told to attempt to produce a vocal sound while the larynx is being compressed. It was found that usually, after a little perseverance, a feeble sound was produced, and this was followed by a normal voice sound. The chief thing is to make the cords vibrate properly once or oftener. The mechanism, once set in motion, seemed to continue of its own accord. According to his theory the manual external compression produces a degree of approximation of the cords sufficient for a decided resistance to the inspired current of air, while a further approximation, sufficient to cause a vibration of the cords, is effected by forcible inspiratory efforts on the part of the patient. Of course the treatment by manipulation is contraindicated in cases of unilateral paralysis due to pressure. In five out of six cases reported by Dr. Oliver restoration of the voice followed this treatment.

---

[1] Virchow's Archiv, vol. xxvii., 1863.

[2] Berliner klin. Wochenschrift, 1869, page 407.

[3] Diseases of the Throat, page 344.

[4] Clinical Medicine, page 162.

[5] Nervous Diseases, page 188.

[6] American Journal of Medical Sciences, 1870.

When, as is frequent, the affection is due to catarrh, topical stimulating applications are serviceable, such as tinct. iodine or solution argenti nitrat. (one drachm to one ounce) or tinct. ferri perchloridi (two drachms to one ounce) applied with a brush or sponge probang or in the form of spray. These remedies stimulate the laryngeal mucous membrane, and thus provoke a reflex glottic spasm. Inhalation of the vapor of a mixture containing aqua ammonia and water, equal parts, or chlorine, is also recommended. Skoda was an advocate of turpentine vapor. The inhalation of sulphuric ether is sometimes effective, particularly where there is reason to doubt the genuineness of the affection. Cohen says, with reference to his experience of such cases while an army-surgeon during the war, "It was curious to notice, after the patients had learned the object of placing them under anæsthetic influence, how well they could control themselves under the influence of the ether, not a sound escaping them until the moment of unconsciousness, but oblivion having once ensued the effect in coming to was not anticipated, or at least was forgotten under the anæsthetic condition, and the intoxication would be evinced by the usual clamors, when a sudden restoration of consciousness would announce to them with a moral shock the cure of their aphonia."

Insufflations of powdered alum, tannin, or other astringents are sometimes promptly curative in catarrhal cases. Probably not a few of those present have practically tested the value of this method in the clinics of Schrötter, Störk, or Schnitzler in Vienna.

Faradization is mentioned by all writers as the most important therapeutic measure in phonic palsy. Its results are proverbially variable, and while often successful it fails in some instances. Ordinarily one pole of the instrument is applied directly to the vocal cords, the other to the thyroid cartilage externally. Before applying electricity it is considered advisable to wait until any local inflammation has subsided. It should not be forgotten that "in hysterical aphonia[1] any form of irritation, electrical or otherwise, may cause instantaneous cure, and that some of the most brilliant achievements of mesmerizers and of those who practice laying on of hands and other flummeries have been made in this affection." Tobold, while admitting the good results of the application of the induced (faradic) current in many cases of paralysis, considers it inferior to the constant (galvanic) current. He testifies that the effect of the latter, especially in phonic palsy, is often prompt, and that it produces comparatively speedy results when the induced current is unsatisfactory or negative. Dr. F. I. Knight says that in cases of functional aphonia arising from bilateral paralysis of the glottis closers, the application of the electric current almost always effects a cure, sooner or later, through reflex action. Dr. Tanner,[2] after commenting on the fact that the treatment of phonic palsy is often unsatisfactory, dwells upon the good results obtained by the application of electro-magnetism to the *tongue* only, employed in connection with other remedies. Having proved by laryngoscopic examination that the aphonia is not caused by polypi, diseased arytenoid cartilages, or any morbid growth in the region of the larynx, and that there is no inflammation, ulceration, or serous infiltration of the mucous membrane, these organic conditions being often associated with hysteria, and any uterine functional disorders having been, so far as practicable, corrected, his method of procedure is as follows: The patient is placed in an arm-chair, the head being steadied by an assistant. One handle of the instrument (moistened) is then placed in her hand, while the other one is pressed upon the tongue. Usually a loud scream is sufficient evidence to herself and others that the voice has actually returned.

Dr. Seaverns[3] has reported a case in which, after various gargles and inhalations had been tried, and after repeated faradization of the laryngeal muscles had failed, the voice was eventually restored by means of blisters, one of which was placed along the spine, and another over the upper part of the sternum. They were applied at bed-time, and on the following morning the patient, although suffering greatly from the local effect of the blisters, was able to speak. It was a doubtful matter whether the happy result was due to the pain caused by the heroic treatment or to the counter-irritant effect upon the spinal nerves.

Dr. Thaon[4] advocates the actual cautery applied upon different points along the spine, and remarks that this measure is often successful. In attempting to explain its mode of action he asserts that it "probably acts by modifying the cerebral zone which holds the laryngeal trouble under its sway!" He also recommends metallo-therapy. The application of a necklace of gold pieces worn over night was sufficient in one case to banish the aphonia. Whether this result was due to the actual contact of the precious metal or to the moral influence of this attractive therapeutic measure upon the patient's mind is, perhaps, an open question.

After the restoration of the voice pathological conditions[5] which have existed in connection with the aphonia may serve as a guide to the subsequent treatment. Reading aloud for a while every day is valuable as a means of furthering the nutrition of the laryngeal muscles. Absolute rest of the vocal organs is not advisable, but rather their systematic exercise, and this is true even of those comparatively infrequent cases where the aphonia was caused by over-straining the voice.

---

[1] Beard and Rockwell, Medical and Surgical Electricity, page 529.

[2] Lancet, vol. ii., 1869.

[3] Boston Medical and Surgical Journal, August 15, 1878.

[4] Edinburgh Medical Journal, October, 1881.

[5] Flint.

RECENT PROGRESS IN GYNÆCOLOGY.

BY W. H. BAKER, M. D.

CAPILLARY DRAINAGE OF THE PERITONEAL CAVITY.[1]

DR. F. A. KEHRER, in a paper on this subject, after referring to the importance in general surgery of quickly removing from wounds blood and secretions, speaks of the different opinions existing among surgeons as to drainage after operations opening the peritoneal cavity, some considering it a necessity in all operations of the kind, others, and by far the greater number, only when certain complications occur. The problem to be solved is to completely draw off the fluids from a cavity which is only partially filled, having several shallow depressions at its base.

The author now considers the various methods which have been employed hitherto, and notes their objections. The prone position, after fixing short drainage tubes in the abdominal wound, he says, has not been tried, and rightly judges it would be impossible. The second method, by drainage tubes through the vagina, is open to the objection of the difficulty of keeping the vaginal secretions from the abdominal cavity. The third method, by means of drainage tubes through the abdominal wound into Douglas's pouch, is objectionable, because the fluids will flow out only when they have reached the height of the outer end, or must be removed in some manner by suction. The fourth method, that of a syphon, is not applicable, because the fluids are not usually present in sufficient quantity.

The author recommends a fifth method, that of capillary drainage by means of a wick. He has tried it with excellent result. The wick, after being thoroughly disinfected by several hours' boiling in a five per cent. solution of carbolic acid, is drawn through a piece of rubber tubing, and this introduced into the abdominal cavity. The end in the abdomen is divided into three portions: one in Douglas's pouch, the other two at the sides of the peritoneal cavity. The free end is spread out in the gauze dressing. In less than twenty-four hours the dressings become soaked with reddish fluid, so that they must be changed under spray. This occurs several times in the first forty-eight hours, when the secretion as a rule ceases and the tube is removed.

In order to change the wick frequently, which is necessary as the capillary spaces become quickly plugged and the capillary action ceases, the author has prepared a double canula, the outer one being left *in situ*, the inner one removed, and charged with a wick as often as may be necessary.

Dr. Hegar, in a later number of the same journal,[2] refers to the method as described by Kehrer, and says that he has used it in his clinic for several years, with two modifications, however. The first is that he uses a simple glass tube in place of the complicated metal double canula described by Kehrer. The second difference is that Kehrer uses a long wick, the end of which projects from the upper end of the drainage tube and conducts the fluids into the gauze dressings. Hegar regards the procedure as increasing the difficulty of keeping the whole antiseptic, and instead he uses short strands of wool, which are changed as often as they become thoroughly soaked. Ordinarily only in the first twelve hours is a frequent change necessary.

PERIUTERINE ADENITIS.

A. Courty, in a recent paper,[3] describes a disease which is characterized by severe subjective symptoms, and consists in an inflammation of the lymph channels behind and near the uterus. Numerous clinical observations, and also observations from post-mortem examinations, give the following characteristic symptoms for this affection: pains in the abdomen shooting towards the rectum or ischium (which continue even after the cessation of uterine pains occurring simultaneously) especially on sexual intercourse, and also when sitting, walking, or riding. Touching with the finger or the edge of the speculum always causes pain. On digital examination one finds one or more hard, sometimes smooth, sometimes irregular bodies, the size of beans, or even smaller, behind the cervix uteri, or near by, especially to the right side at the lower edge of the broad ligament. They are sometimes easy, sometimes difficult to reach. The uterus is usually freely movable, and the surrounding tissue normal. Ordinarily there is coexistent a chronic endometritis, or such has preceded it, and the author considers the affection of the lymph channels as dependent upon this cause. Prolapse of the ovary or cellulitis might be confounded with this trouble, but the ovary is larger than these glands, and exudations can be distinguished by their greater extent, their immobility, and their bands of cicatricial tissue.

Treatment should be at first antiphlogistic, later directed towards absorption. Hot-water douches, gray ointment, cathartics, iodine, iron, quinine, and baths are indicated.

ABDOMINAL DELIVERIES IN THE UNITED STATES FOR 1880.

Dr. R. P. Harris, of Philadelphia,[4] continues his record of the abdominal deliveries in the United States, and gives as the result for 1880 five Cæsarean operations, and three Porro Cæsarean. The results of the classic Cæsarean sections are encouraging, three women and four children having been saved. The antiseptic method of Lister, the cleansing of the abdomen from blood and other fluids, the wire uterine suture, and numerous minor modifications of the operation have undoubtedly contributed to this result. The uterus was sutured in three out of the five cases, with a saving of two. The Lister method was used in two cases, and phlegmasia dolens, which attacked two of the three American Porro cases, occurred in one case.

The results of the three Porro Cæsarean sections were one woman and two children saved. With enlarged experience and improved methods we should equal the record of the maternities of Milan and Vienna. The Santa Caterina of Milan has saved six women out of eight, and the Krankenhaus of Vienna eight out of eleven; the last six operations in each having been successful.

REMOVAL OF CANCEROUS UTERUS IN A PREGNANT WOMAN.[5]

October 21, 1881, Mr. Spencer Wells performed Porro's operation, or a combination of the operations of Freund and Porro, on a patient aged thirty-seven, between five and six months advanced in pregnancy, and suffering from epithelioma of the cervix uteri. Porro's operation is a supra-vaginal amputation of the uterus in addition to the Cæsarean section. Freund's operation is total excision of a cancerous uterus by abdominal section. Mr. Wells has combined the two operations.

---

[1] Centralblatt für Gynäkologie, No. 3, 1882.

[2] Centralblatt für Gynäkologie, No. 7, 1882.

[3] Archives de Gynäkologie, April, 1881.

[4] American Journal of the Medical Sciences, April, 1882.

[5] British Medical Journal, October 29, 1881.

In this case strict antiseptic precautions were used. The vagina was plugged with wet phenolized cotton wool; then the uterus was exposed by an abdominal incision eight inches long. The fœtal movements were active. The uterus was brought out of the wound, the upper half of which was temporarily closed by several silk sutures. The left broad ligament was next transfixed by a stout silk ligature, external to the ovary, and below the Fallopian tube. The same proceeding was repeated on the right side. The bladder was then dissected off the uterus, the walls of which were very thin. A small rent was made into the uterine cavity during the process of separation of the bladder, the liquor amnii escaped, and the fœtus, which measured ten and three fourths inches and weighed fourteen ounces, was extracted. The umbilical cord was divided, the placenta being left in the uterus; the fœtus made only three or four respiratory efforts. The ureters were invisible throughout the operation.

After the separation of the bladder the cancerous mass close around the os uteri was exposed. The uterus was separated by cutting through the vaginal wall around and quite close to the uterine wall, all bleeding surfaces as they were divided being secured by pressure forceps. All bleeding vessels were then secured by ligatures of phenolized silk. The opening from the vagina into the peritoneal cavity was closed by silk sutures after removing the vaginal plugs of cotton wool. Very little blood was lost. The patient suffered chiefly from sickness during the first two days after the operation, but she said not more than after some of her previous labors. The patient otherwise did well, and eventually recovered. This was the first operation of the kind done in England.

ÆTIOLOGY OF LACERATION OF THE CERVIX UTERI.

Dr. Ely Van de Warker, in an interesting paper on this subject,[1] deals very fully with the numerous pathological and mechanical causes of this affection, of which the following is a summary: —

"A. Pathological changes in the cervix may lead to laceration during parturition from: (1) progressive degeneration of tissues due to repeated labors; (2) cervical inflammation and hyperplasia; (3) degeneration of ovula Nabothi, or cysts or follicles degenerated into cavities; (4) softening due to chronic catarrh and inflammation; (5) presence of cicatricial tissue; (6) œdema of vaginal portion occurring at the first stage; (7) œdema due to heart disease.

"B. Deviations from the normal in conditions of the cervix antecedent to the labor due to general conditions, as follows arrested or impaired gestation, softening due to many causes.

"C. Deviations from the normal in the mechanism of labor. (1) Want of balance between radial expansion of cervical canal and elongation; (2) untimely expulsion with reference to cervical expansion; (3) excessive amplitude of pelvic strait, or (4) a small fœtus permits too sudden expulsion; (5) adherent membranes; (6) sudden rupture of membranes, with rapid expulsion; (7) administration of ergot.

"D. All the foregoing conditions being normal, the cervix may be endangered from defect in the action of the uterus: (1) irregularity in action of the uterus (uterine polarity); (2) disturbance in direction of descent of head from uterine obliquity; (3) harmony of uterine action disturbed by mental emotion; (4) hysterical state.

"E. Mechanical causes: (1) obstetrical operations; (2) vesical calculi; (3) long-continued distention by arrest of the head at the perinæum."

MODIFICATION OF PÉAN'S OPERATION FOR REMOVAL OF UTERUS.

Dr. de Zwann, in the Transactions of the International Medical Congress held in London, 1881, gives an account of the removal of a large interstitial fibromyoma of the uterus by Dr. Péan's method. He proposes the following modifications of the method: —

(1.) An abdominal incision is made large enough to allow of the tumor being easily drawn out of the abdominal cavity without injury to the peritonæum.

(2.) The abdominal cavity is immediately but temporarily closed.

(3.) The tumor is surrounded by an elastic band.

(4.) The temporary stitches are replaced one by one by permanent peritoneal and surface sutures.

The purpose and aim are: —

(1.) To protect the organs of the abdominal cavity against a sudden chill.

(2.) To obviate all risk of bowels being forced from their position.

(3.) To prevent hæmorrhage.

New Instruments.

LARYNGEAL FORCEPS.

BY THOMAS AMORY DE BLOIS, M. D.

The forceps of Schroetter consist substantially of a tube which is fixed and contains a sliding wire, or stilet; to the extremity of this wire the forceps are attached.

The motion of closing these forceps is made by a traction on the stilet which partially draws back the forceps within the tube, thus approximating their opposing jaws; therefore, at the moment of closure there is a retraction of the instrument, which often causes the object to elude the grasp of the forceps when otherwise it might be seized.

Fig. 1.

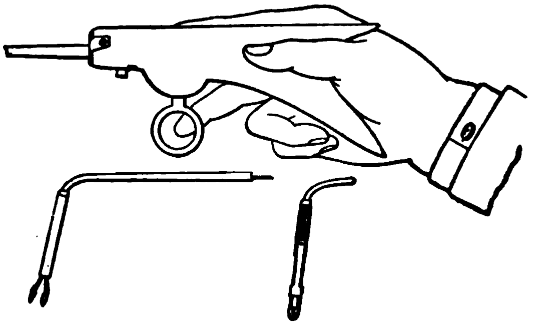


Fig. 3. Fig. 2.

Figure 1 represents the manner of holding the forceps.

Figure 2 represents the end of the forceps closed, with the covering sleeve removed to show the moving parts.

Figure 3. The end of the forceps open.

To obviate this difficulty Turck somewhat changed Schroetter's instrument by fixing the stilet in the handle and pushing the tube over it by a motion of the thumb. Although this change obviated the retraction motion, it substituted for it a motion of translation of the jaws of the instrument, equal in extent to the other and almost as vicious.

---

[1] American Journal of Obstetrics, January, 1882.

What I have sought to accomplish is to do away with both these motions, by fixing the forceps to the end of an immovable tube. The jaws are approximated by a forceps closer, which slides over them without in any way deranging their position; the whole mechanism is covered by a metal sleeve to protect the parts from contact with the mouth.

I have also so arranged the handle as to be grasped as one would hold a pen; and by making use of the mechanical appliance of the rack and pinion, I have sought to overcome the large amount of friction which seems to distinguish the other forceps.

Recent Literature.

Medical and Surgical Reports of the City Hospital of the City of Boston. Third Series. Edited by DAVID W. CHEEVER, M. D., OLIVER F. WADSWORTH, M. D., and A. L. MASON, M. D. Boston: Published by the Trustees. 1882.

THE surgical portion of the volume is comprised in an account of some cases by Dr. Cheever, a surgical abstract by Dr. Gay, a description of new surgical apparatus by Dr. Bolles, and tables of statistics of amputations by Dr. Burrell, the summary of the latter including all the major amputations since the opening of the hospital in 1864. Of course the chief interest of the surgeon is centred upon the first two, but we propose to touch briefly upon all these contributions. Before doing so, however, we would draw attention to the fact that the present series maintains the high character of its predecessors, and is full of instruction and interest. It seems to be established that the laboring oar in the preparation of these Reports shall fall upon the same members of the surgical staff. Thus, while in the first series Dr. Cheever bore off all the honors, in the second and the present series they have been shared with Dr. Gay. It would seem that in so large a hospital, with so many important cases and operations, and with so distinguished a staff, more might be accumulated in the space of five years that would be of general and permanent interest to the profession, and this not in the way merely of reports of cases and abstracts, but as broad and comprehensive monographs on different subjects connected with the art and the practice of surgery. In this respect we think the present issue falls somewhat behind its predecessors, and the surgical portion does not quite come up to the other contributions. But we are grateful for what has been given us, and would only remind the surgical staff that they have in these reports the opportunity of speaking to a far larger audience than they ordinarily address, and one which is eager to profit by their distinguished learning and varied experience.

The first of the surgical articles is entitled Surgical Cases, by Dr. Cheever, and, as might be expected, contains the rêports of some operations which add to his already brilliant reputation for boldness and skill, but from which the ordinary surgeon would shrink.

The first cases are under the head Excision of *the* Goitre. Four cases were operated upon successfully, and so far as known no recurrence has taken place. A fifth case, in which excision was impossible, was treated by setons, and the patient died of pyæmia in a week's time. We are glad to find that when the tumor is small Dr. Cheever will in the future advise a six months' use of the iodides of iron and potash, the latter in cumulative doses. Of course it is hardly necessary to remind the reader in this connection that, when the enlargement is chiefly cystic, a cure has often been effected by the injection of the tincture of iodine.

Under the head of Aneurism Dr. Cheever reports an extremely interesting case of temporal aneurism of the cirsoid variety, which was safely conducted to a permanent cure after repeated operations. Dr. Cheever, like a skillful general, planned his attack so as first to cut off the main supply of the tumor by tying the external carotid, and thirteen days later ligating the tumor by "seventeen deep sutures radiating from the incision toward the periphery." During the latter operation thirteen ligatures were used to check hæmorrhage. In the preliminary operation the benefits of Listerism were shown in the fact that the wound healed by first intention, and the risks of secondary hæmorrhage were happily avoided.

Dr. Cheever reports a second case of excision of the tonsil for a malignant growth, the first having been reported in the first series of the City Hospital Reports. In the present instance the tumor was attacked from without through a section of the lower jaw, just in front of the masseter muscle. Tracheotomy was performed. The operation was accomplished successfully, the divided bone wired, and the wound closed. For a short time everything promised well, but at the end of a month a bubo was removed; in two months the tumor had started again, and was twice burned away, and in five months "the pharyngeal tumor was larger than ever, and the bubo was recurrent in an enormous growth!" After reading the extremely interesting and instructive account of this case we were struck with the grim humor of the first sentence of the closing paragraph: "The question remains whether, in view of such rapid and persistent recurrence, as in the second case, it is worth while to interfere with cancer of the tonsil at all by operation." To our mind the question does not remain, but is definitely answered, and we think most surgeons take this view.

But we cannot dwell longer upon this article, and pass to the surgical abstract. The first subject that arrests our attention is the diagnosis, prognosis, and treatment of malignant growths, and we agree fully with the views advanced and with the indorsement of Prof. S. W. Gross's valuable work on Tumors of the Mammary Gland. In the absence of certainty in the diagnosis, and in the firm belief that an early operation secures a prolonged life, freedom from pain for a while, and encourages hope, we have always advocated early and repeated operations. So far as those on the breast are concerned we are left a little in doubt whether the writer has practiced the method of operating advised by Dr. Gross. For ourselves we have not yet been convinced of the advantage of the large open wound left to granulate, over the ordinary method, provided the incisions in the latter are well removed from all apparent disease. We question whether the majority of surgeons have as yet yielded their adhesion on this point to the views of Dr. Gross. In the operations for malignant growths of the tongue we find no mention made of the valuable procedure brought forward by Dr. G. F. Shrady, namely, ligation of one or both of the lingual arteries as a preliminary step. In a recent case at the Massachusetts General Hospital this was done by Dr. Warren, and the removal of the entire organ was almost bloodless. There is one more point in this connection to which we would refer, and that is the treatment by caustics. We agree entirely with the writer's view that their use is extremely limited, and that excision presents every advantage, and yet we find, in common with other surgeons, we presume, that patients often slip away from us, and prefer the slow torture of the "cancer doctor's" method. It is evident that the sound views of the writer, and, we think, of the profession, need to be widely disseminated among the laity.

In the operations upon the vessels for aneurism, etc., we are disappointed in not finding more positive testimony for or against the use of animal ligatures. In one case of Dr. Thorndike's it is stated that "the operation was antiseptic," and perhaps the animal ligature was used; in six days there was secondary hæmorrhage, but probably it was not due to the slipping of the ligature. In a case of Dr. Gay's the femoral artery was tied "with a double catgut ligature" with entire success. These are the only references in this connection to the animal ligature.

The experience of the hospital in operations for strangulated hernia is not particularly favorable. Of twenty-six cases operated upon twelve died. The advocates of the views so strongly urged by the late Dr. Erskine Mason will feel themselves fortified by the statement that "the sac was opened in every case but two," which were of femoral hernia, and both of which recovered! We are glad to find some testimony as to the value of the Heaton method of obtaining a radical cure. The writer has given us the result of his experience in eighteen cases of rupture, partly in private practice, and of these five only were cured, eight were, and five were not, relieved. We presume that is quite as favorable a showing as can be given, and it has always seemed to us that the operation by no means warrants the merit attributed to it. We should, from a limited observation, be inclined to ascribe more risk to it than does Dr. Gay, and we think that many of the cases in young persons, and with small rings, would have been equally cured by the application of a well-fitting truss. It is precisely in the cases with large rings and large tumors that the need of the operation is greatest, and in these it seems signally to fail.

Under Head Injuries we notice a fact bearing upon the diagnosis of fracture of the base of the skull. "Of twenty-nine cases with hæmorrhage from the ear," seven recovered, and of fifty cases of the kind occurring in ten years nineteen recovered. We believe that this sign is no sure indication of fracture of the base, and the large proportion of recoveries here stated would seem to indorse that opinion. The operation of trephining has been performed "five times in as many years," with the fortunate result of three successful cases. This operation is evidently once more in the ascendant with American surgeons, and we think with propriety. If it is reasonably clear that the substance of the brain or its coverings are pressed by bony fragments, there can be no question of the propriety and advisability of the operation. To wait for symptoms is in such a case a sign of timidity, and fraught with danger to the patient.

Among the operations for excision we find eight of the hip with a mortality of six! The previous record of the hospital had been more favorable, showing more than half relieved or cured. But we think, except for certain quarters, the conclusions of the writer are true, namely, that the operation is less frequently employed than formerly, and conservative measures are found to yield more satisfactory results. We observe, too, that of eight excisions of the elbow none required a subsequent amputation, which speaks volumes for the skill of the operator and the subsequent care of the patients, although something may be due to the selection of the case. There was no excision of the knee-joint, and we regard this as silent testimony to the fact that this operation is not held in favor. We are inclined to think that, for this joint, amputation presents the greater advantages.

We cannot dwell longer upon this abstract, but would recommend to the reader's perusal the singular case of removal of a stone from the abdomen by Dr. Thorndike, and two cases by Dr. Gay, one of œsophagotomy, performed at the expiration of forty-eight hours, and one where rhinoplasty, judging from the heliotypes, relieved a most hideous deformity.

The "new surgical apparatus," brought forward by Dr. Bolles, certainly commends itself for its ingenuity. We cannot confess to any special leaning towards it, however. The adjustable fracture box is so complicated in its simplicity that we hardly think it will come into general use even in hospitals. To us it seems as if, at this late day, time was lost in devising new splints and apparatus. A few sheets of wadding, a few metal strips, and a few plaster bandages, with a good knife, and a fair amount of skill and quickness of observation, will make a patient quite as comfortable, and are much more available, than most of the appliances with which the lumber rooms of our hospitals are filled.

We turn now to the statistics of amputations as presented in the table for fifteen years since the opening of the hospital, and for the purpose of comparing the results obtained we present the statistics of the Massachusetts General Hospital, as given by Dr. Chadwick, and the interesting tables published by Dr. Ashhurst in Wood's International Encyclopædia, which include the statistics of Dr. Chadwick. We have grouped the three classes of cases, that is, the traumatic primary and secondary, and the pathological, and give the gross result: —

	City Hospital.		Massachusetts Gen. Hospital.		Ashhurst's Tables.	
	Cases.	Mortality per cent.	Cases.	Mortality per cent.	Cases.	Mortality per cent.
Shoulder	21	42.9	26	42.3	1867	37.7
Arm	58	27.6	76	18.6	7284	28.4
Elbow	2	0	–	–	–	–
Fore-arm	42	11.9	68	19.1	2820	19.4
Hip	4	100.0	8	33.3	633	64.1
Thigh	107	50.4	236	28.8	5606	63.8
Knee	13	46.1	16	48.7	794	47.7
Leg	98	27.5	267	24.7	5247	34.8
Ankle	23	13.1	–	–	–	–

We thus see that the records of the hospital show a very favorable result in comparison with the large number of cases tabulated by Dr. Ashhurst, with the single exception of the hip-joint amputations, and this is particularly true of the amputations of the thigh, leg, and fore-arm.

Without trespassing farther upon our limited space we will only express our regret that we have not some more positive testimony, *pro* or *con*, from this great hospital upon the point which is so widely discussed, antiseptic surgery. The report shows most conclusively what a large amount of work is done, and well done, by the able staff of surgeons connected with the hospital. It would be gratifying to the profession if the series was continued at shorter intervals than that of five years.

Medical and Surgical Journal.

THURSDAY, JULY 20, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year including postage*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

FOURTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF RHODE ISLAND.

THE fourth annual report of the State Board of Health of Rhode Island contains, like its predecessors, some interesting things. The secretary's report, with which it opens, covers the usual ground. The general report is for the year ending December 31, 1881, but the figures dealt with are for the year 1880.

The whole number of births recorded in the State of Rhode Island during the year 1880 was 6295; the whole number of marriages 2769; and the whole number of deaths 4829.

From the secretary's report in regard to the returns of vital statistics we take the following items: —

The number of births, marriages, and deaths do not occur with any regularity from year to year, but the opposite is the rule. At the same time there is a gradually increasing number of each of the classes of events, taking periods of five years together, corresponding in some degree with the increase of population. A comparison of the results of registration during the year 1880 with the previous year will show that of the whole number of births there were 55 *less* than during 1879, and of living births 31 less. There were in the whole number of births during 1880 419 less than during the year 1878, and with one exception less than in any year since 1873. With an increase of population during these years of between 20,000 and 25,000 there must have been causes outside of natural causes to have so largely lessened the ratio of births to population. The number of marriages during 1880 was 373 *larger* than during the previous year, and larger by 139 than in any other year during the whole period of registration. Of deaths there were recorded 357 *more* than during the previous year, the number being the largest ever recorded in any one year.

BIRTHS. In the division of births it will be found that the average proportion of that class of events to the population varies from one birth in every 33.54 persons, or nearly three per cent., in Bristol, to one birth in every 99.59 persons, or about one per cent., in Jamestown.

The towns having an exceptionally high birth-rate, following Bristol, are: Lincoln one birth in every 35.61 persons; Woonsocket, one in every 36.29; North Providence, one in every 40.92 persons.

Of the 6295 children whose births were reported in 1880, there were 3241 males and 3054 females. This gives 104.8 males to each 100 females, or 51.48 males and 48.52 females in each 100 children.

There has been no year during the whole period of registration in which the number of male children born during the year has not exceeded the number of female children born during the same time. In 1865 the proportion was 112.9 males to each 100 females, or about 53 males and 47 females in each 100 births, an excess of 60 males in each 1000 births. In 1880 the male children born were in excess in every county except Washington, and also in excess in the cities of Providence and Newport. The proportions, however, vary considerably, though the larger the population the less the variation from year to year.

During a period of twenty-seven years the average order of the occurrence of births in the different quarters of the year, from the smallest number upward, has been as follows, namely, second, first, third, fourth. The returns for 1880 show the same result. During the period of five years, from 1858 to 1862, inclusive, the proportion of births of purely American parents was nearly one half of the whole number. The proportion of births of children of the same parentage gradually lessened until in 1876, fourteen years thereafter, it was only 40.84 per cent. It then, in the following year, began to increase, and has so continued to the present time, the difference between the year 1879 and 1880, however, being exceedingly slight, a simple falling off of less than three hundredths of one per cent. The maximum proportion of births of children of purely foreign parentage occurred between 1863 and 1867, since which time, with slight exceptions, the proportion has gradually declined. In 1863 the proportion of children born of foreign parentage was 46.79, the largest during the existence of the State. In 1880 the proportion of the same was 40.60. In the mean time the proportion of children born of American fathers and foreign mothers has increased from 3.72 per cent. in 1863, and in the average of five previous years, to 6.62 per cent. in 1880. At the same time, and during the same period, the children born of foreign fathers and American mothers have increased from the proportion of 3.45 per cent. to 9.23 per cent. Previous to 1863 the number of children born of mixed parentage was scarcely more than seven per cent. in any year. In 1879 the proportion of the same was 15.90 per cent., and in 1880 15.85 per cent.

MARRIAGES. For various obvious reasons the marriage rates of the different towns present very much less uniformity than those of either births or deaths. The proportions vary from one person married in every 32.69 of the population, or 3.06 per cent., in Foster, to one person married in every 163.42 persons, or 0.61

per cent., in Cranston, a difference of more than five to one. It has happened, with scarcely an exception, during the whole period of registration in Rhode Island, that the largest number of marriages in any quarter of the year have been in the last quarter, and the smallest number in the first quarter. The difference in percentage between the first and last quarters of 1880 is larger than the average of twenty-seven years, and the percentages of first and third quarters of 1880 are smaller, and the second and fourth are larger than the average of the long period.

DIVORCES. The number of applications for divorce reported from the different counties in Rhode Island in 1880 was 347. This number is 92 more than in 1879, and 89 more than in 1878. During the year 1880 there were 273 applications for divorce granted, which were 27 more than in 1879, and 77 more than in 1878. The proportion of the number of divorces granted during the year 1880 to the number of applications for a decree of divorce was 78.6 per cent. This proportion is rather larger than the average of a series of years. The number of applications for divorce in 1880 was an excessive increase over that of any preceding year. The ratio of applications to the whole number of marriages during the year was one application for divorce to less than every eight marriages.

DEATHS. The greatest mortality, in proportion to population, is found in the city of Providence, with an annual average of one decedent to every 50.24 persons, or 1.99 per cent., following which is the town of Woonsocket, with an annual average of one decedent in every 51.66 of the population, or 1.92 per cent. Following Woonsocket in the bad eminence of a high death-rate are, Cranston, with the average annual ratio of 1.82 per cent.; Richmond and West Greenwich, 1.71 per cent. each. For the period of ten years no town in the State shows an average annual death-rate as high as two per cent., the city of Providence, however, falling short by only a small fraction.

The minimum ratio of mortality to population is found in the town of Jamestown, with one decedent to every 116.19 persons, or 0.86 per cent. Jamestown, it will be remembered, had also the minimum percentage of births.

As a rule it will be found that a high birth-rate in any town will also be attended by a high death-rate. The reason will be obvious when it is remembered that of every 100 children born in the State of Rhode Island during the last twenty-five years 35 have ceased to exist at the end of five years.

Of the 4829 persons whose deaths were returned during the year 1880, 2366 were males, and 2463 were females; the ratio standing at 96.06 males to each 100 females, or 48.96, males, and 51.04 females in each 100 decedents.

During a period of ten years previous to 1863, the number of female decedents exceeded the male decedents by about an average of three per cent. each year, and during the eighteen following years the rule then apparently established has held good, the exceptions being simply confirmatory, the average only being slightly less. But at the same time the records of death have shown an excess of mortality in the female sex, the records of birth have shown an excess of births of the male sex. This would naturally lead to the supposition that the number of the male sex must be increasing and *vice versa*. By the census of 1880 the population of the State by the sexes was as follows: Males, 133,030; females, 143,501. This will show an excess of 10,471 females in the general population. It is obvious that there is either a larger proportional immigration of females, or a larger proportional emigration of native males from the State, to account for the difference. Probably the fact is the result of both circumstances. This excess of female population would account for the excess of mortality in numbers of the female sex.

The decedents of American parentage have been steadily losing in the proportion to the whole number, from year to year, until in 1880 there was a slight gain, not reaching one per cent.

On the other hand, the decedents of foreign parentage have been steadily increasing in percentage as well as numbers, except as just stated.

August, which for a long period was the first of the different months of the year in the order of largest mortality, has fallen to the second place in the list during the last four years. June is the only month in the year which has sustained its place on the list without large change.

In addition to the secretary's report the volume contains papers on Malaria in Rhode Island by Dr. C. V. Chapin, of Providence, on Prenatal Education by Dr. Franklin C. Clark, of Providence, and one on House Drainage and Sanitary Plumbing by William Paul Gerhard, of Newport.

In regard to malaria Dr. Chapin says, reviewing the returns from different parts of the State: "It appears that though a few cases of malarial disease had been noticed in the State prior to 1880, that was the first time that any serious outbreak had occurred in many years, in fact since the early settlement of the colony. During the summer of 1880 intermittent fever, which had been slowly approaching us from the valley of the Hudson, seemed to gain a firm foothold on Rhode Island soil, and a very serious endemic occurred at the works of the Nayatt Brick Company, in Barrington. Only a comparatively few cases were reported from Providence and one or two other places. In the summer of 1881 it had certainly not decreased in Barrington, and had increased to an alarming extent in Providence and other towns which had been only slightly visited before, and appeared to the extent of a considerable number of cases, in many places hitherto exempt. The regions that were particularly affected were the low-lying portions of Westerly, the town of Barrington, the lower portion of the valley of the Pawtuxet River, together with the region drained by the streams there flowing into it, and the valley of the Blackstone, especially from Central Falls to the Massachusetts line. All these regions abound in marshes, swamps, and reservoirs, subject to frequent and great change of level. The subsoil is usually sandy and gravelly, more rarely clayey. Unusual excavations were in progress in one or two places. The streams and reservoirs were exceedingly low on account of the severe drought, but, on the whole, it would be rather unreasonable to say that the difference in the physical conditions of these places last summer was the cause of the prevalence of malarial disease. Neither were the atmospheric conditions so different from those of former years as to warrant the theory that we could here find a sufficient cause for the development of malaria. Almost the only general statement that can be made after a review of the reports from the several towns, is, that malarial disease first appeared in the immediate vicinity of low, wet regions, and that during last summer the *immense majority* of the cases occurred within a short distance of such places, a few occurred near excavations, and some very few apparently had no connection with either. Except in rare instances, there seemed to be no relation between the disease and imperfect sewerage."

Mr. Gerhard, in his paper on House Drainage and Sanitary Plumbing, points out the dangers arising from the introduction of the so-called "modern conveniences" into our dwellings, and at the same time establishes good and safe rules for the proper drainage and plumbing of houses. The various details of drains, traps, methods of ventilation and different forms of water closets and water fixtures are made plain and clear by some very good illustrations.

◆

THE GUITEAU AUTOPSY.

The autopsy of the assassin of President Garfield did not indicate the presence of any pathological condition characteristic of insanity, nor, on the other hand, could it be inferred from the appearance of Guiteau's brain that he was not insane. If his disease were the so-called moral insanity, which had developed into chronic subacute mania with periods of greater and of less excitement from time to time, the results of the microscopic examination will be equally negative.

So far as the official report is concerned, the conclusion cannot be reached that the post-mortem examination has shown the brain to be of a low type in development or asymmetrical to an extent which would make *primäre verrücktheit* a fair inference.

Indeed, the relation between degrees of asymmetry of the brain and congenital defects, on the one hand, and, on the other hand, between demonstrable evidence of physical disease and insanity, is so little understood at the present time, that there are very few of the mental diseases associated with lesions of the brain which may be said to be characteristic of these diseases. In general paralysis of the insane, only, might a microscopic examination prove a particular form of insanity when nothing definite could be learned from the gross appearance of the brain. It can be still said, however, that some mental aberration is more likely in the individual whose brain shows signs of local inflammation than in him whose brain is perfectly healthy, and that easily recognized marks of pathological changes are more common in those who have been for a long time insane than in others whose physical and mental health has been good.

The fatality or bad arrangement which has marked this unfortunate case throughout has pursued it to the end; and the record of the autopsy is most conspicuous by the absence of that scientific accuracy and thoroughness which were so much to be desired.

◆

THE MEDICAL TESTIMONY AT THE GUITEAU TRIAL.

If it is true, as is suggested by Mr. Lyman in his note last week, that the medical experts called to testify in the case of Guiteau had a right to demand of the lawyers that they should be asked certain questions, it is a fact that those gentlemen did not know that they could do so.

The prosecution adopted the theory that Guiteau was sane and responsible, the defense that he was acting under the insane delusion of inspiration, and both discharged, or failed to examine, those physicians who did not adopt the view favorable to their theory. We had always supposed — it certainly is the custom — that lawyers call what witnesses they please, and ask them only such questions as they choose.

Our experience of public opinion in this matter is quite different from Colonel Lyman's. Many persons, including lawyers, consider Guiteau insane, although they differ in opinion as to hanging him. To be "bad and depraved" is quite characteristic of insanity. If we would hang, immediately upon commitment to an insane asylum, those of the insane whose disease has let their worst passions loose, we might save many murders and more dangerous assaults upon asylum officers.

With this we hope to be allowed to take leave, at least for the present, of this case and its immediate consequences. All sides and all opinions have been given a fair hearing in our columns. In forming and advocating our own opinions we have been influenced by a careful consideration of all the details presented by the case as they have been brought to light, and not at all by the names or the numbers of those differing from us.

◆

AN ACT TO PREVENT THE SPREAD OF CONTAGIOUS DISEASES.

Appended is the draft of an Act reported at the ninth annual meeting of the American Public Health Association, at Savannah, December 2, 1881, by a committee appointed for the purpose and in accordance with a vote passed at the eighth annual meeting at New Orleans in 1880. The committee was instructed to make a final report at the tenth annual meeting in October, 1882, at Indianapolis. As most of our readers know, the chairman of this committee is Dr. Albert L. Gihon, Medical Director United States Navy, Washington. Suggestions are requested by the committee of such a character as may enable it the better to complete the duty with which it is charged, which is to secure uniformity in legislation in the States of the Union for the prevention of venereal disease.

The form of this Act is considered advantageous and calculated to win general support, in that men and women are put on the same footing, and there is no suggestion of a licensed prostitution; but the penalty of imprisonment for communicating contagious disease will be a new one.

Article I. *Be it enacted by the* [Senate and House of Representatives of the State of],

That any person within the jurisdiction of the State [or Territory], who shall knowingly communicate, or be instrumental in communicating, directly or indirectly, any contagious disease, such as small-pox, scarlet fever, or venereal disease, shall be guilty of a misdemeanor, and subject upon conviction in any court having cognizance of misdemeanor [where the offense may have been committed] [in the State or Territory], to the punishment of six months' imprisonment in the [county jail].

Art. II. That if any person being the owner, agent, or occupant of any house, room, or place within the jurisdiction of this State [or Territory], shall have reasonable cause to believe any person located permanently or temporarily therein to be affected with a contagious disease, and shall fail to make such fact known to the proper health authorities [or if there be no such officials, to the nearest magistrate having jurisdiction of misdemeanor], he or she shall be deemed guilty of a misdemeanor, and upon conviction in any court having jurisdiction of misdemeanors [where the offender may reside or the offense have been committed], shall be liable to a penalty not exceeding [five hundred] dollars or to imprisonment not exceeding six months, or to both.

Art. III. That the State Board of Health, with the approval of the Governor, and the Health Board of the city of , with the approval of the mayor of said city, shall have power to institute and carry out all suitable measures to prevent the spread of diseases of a contagious character, and may, if deemed advisable, remove to proper hospitals selected by them, all persons suffering from contagious diseases, who, neglecting proper precautions, imperil the health of the community.

Art. IV. That this Act shall go into effect from and after the day of , A. D. .

◆

MEDICAL NOTES.

—We very much regret that an accident to the press last week delayed the delivery of the Journal from Thursday until Monday. Some contributions, and especially the abstract of the Harveian oration, by Dr. George Johnson, thus losing the freshness they might otherwise have had.

— Considerable excitement was recently created in the town of Paterson, New Jersey, by the extraordinary conduct of a small-pox patient of the public pest-house. During the absence of the nurses at breakfast, about seven in the morning, he sprang from the window and made his escape, having nothing on but his undershirt. He wandered about the country, meeting with various adventures, and it was several hours before Dr. Hurd, one of the city physicians, succeeded in finding him and getting him in an ambulance. On the way back to the hospital the man jumped from the vehicle and started to run, but was soon recaptured. Scarcely had he been placed in bed, however, before he again jumped from the window, and made off for the mountains. This time he was caught more quickly, and when brought back was tied fast in bed with strips of sheet torn up for the purpose; but about two o'clock word was received at the police station that he had a third time escaped, and was running naked through the principal street of the town, followed by about five hundred persons, principally children. Several officers started in pursuit, and he was finally captured in a cellar, from whence he was taken again in the ambulance to the hospital, where he was so securely fastened in bed that further escape was impossible. The health authorities then published a notice to all persons who had come in contact with the man to visit the city physician's office and be vaccinated free of charge.

— Dr. Milo A. Wilson, of Denver, Col., died in New York, on July 6th, of Bright's disease. He was a son of the late Dr. R. A. Wilson, of Pittsburgh, and a brother of the late Cregan Wilson, and formerly practiced in New York, where he was assistant surgeon of the Seventh Regiment. At one time he was much interested in experimenting with the effect of music on the insane in the asylums on Blackwell's and Ward's Islands.

— Among the recent discoveries promotive of the comfort and happiness of human kind none is more important than the uses to which common ammonia can be properly put as a leavening agent, and which indicate that this familiar salt is hereafter to perform an active part in the preparation of our daily food.

The carbonate of ammonia is an exceedingly volatile substance. Place a small portion of it upon a knife and hold over a flame, and it will almost immediately be entirely developed into gas and pass off into the air. The gas thus formed is a simple composition of nitrogen and hydrogen. No residue is left from the ammonia. This gives it its superiority as a leavening power over soda and cream of tartar when used alone, and has induced its use as a supplement to these articles. A small quantity of ammonia in the dough is effective in producing bread that will be lighter, sweeter, and more wholesome than that risen by any other leavening agent. When it is acted upon by the heat of baking the leavening gas that raises the dough is liberated. In this act it uses itself up, as it were; the ammonia is entirely diffused, leaving no trace or residuum whatever. The light, fluffy, flaky appearance, so desirable in biscuits, etc., and so sought after by professional cooks, is said to be imparted to them only by the use of this agent.

The bakers and baking powder manufacturers producing the finest goods have been quick to avail themselves of this useful discovery, and the handsomest and best bread and cake are now largely risen by the aid of ammonia, combined, of course, with other leavening material.

Ammonia is one of the best known products of the laboratory. If, as seems to be justly claimed for it, the application of its properties to the purposes of cooking results in giving us lighter and more wholesome bread, biscuit, and cake, it will prove a boon to dyspeptic humanity, and will speedily force itself into general use in the new field to which science has assigned it. — *Scientific American.*

— The monthly report for May of the Connecticut State Board of Health says that malarial diseases are reported as extending slowly over the hitherto unaffected parts of the State, while in the places where they appeared years since the cases are not as numerous of acute ague, but the irregular and masked forms are more prevalent as well as malarial cachexias, that is, chronic malarial poisoning. As the warmer weather approaches the frequency and severity of all forms and types show a marked increase. This is the general report without specifying localities, which would take too much space.

— A boy at play in a court-yard, in Glasgow, a few weeks ago, happened to sit down on a flagstone above a printer's premises. In this flagstone there was an aperture, and while the lad was sitting there some one thrust upwards a red-hot iron, which penetrated some distance into the rectum of the boy, inflicting such injuries that he died at the Glasgow Royal Infirmary in the course of two days. Some arrests have been made in connection with the occurrence.

— There is at present in the wards of the Glasgow Western Infirmary, under the care of Prof. George Buchanan, an interesting case of gun-shot wound of the abdomen. About three weeks ago the patient, a young man, aged twenty-six, was accidentally shot by a companion while examining some revolvers. The two were standing quite close to one another at the time of the ocurrence, and the bullet entered the abdomen of the wounded man. He was without delay removed to the infirmary. On admission there he was found to be in a state of great collapse, and an examination revealed a wound just below the ensiform cartilage, and to the left side. From this wound, which evidently communicated with the abdominal cavity, some bloody serum issued. The patient complained also of pain in the left thigh and leg, which was relieved by flexing the limb. No wound of exit of the bullet could be detected, but the injury received was evidently of so serious a nature that the patient was not expected to survive. Next day, however, he rallied, and no bad symptoms showed themselves. There was no vomiting, the bowels acted regularly, and no peritonitis supervened. Last week, however, he complained of pain in the left lumbar region, and some swelling showed itself, accompanied by a rise of temperature. On the 23d ultimo Prof. George Buchanan cut into this swelling, with antiseptic precautions, and found a cavity filled with blood. On introducing his finger he came upon the broken transverse process of one of the vertebræ, and further examination detected the bullet lying in the erector spinæ muscle of that side. The patient has progressed very favorably since the operation. No doubt the case will be reported at full length subsequently. The *British Medical Journal* believes that it possesses special interest when contrasted with the late President Garfield's case.

CHICAGO.

— The reorganization of the staff of the Cook County Hospital lately made by the Board of County Commissioners has resulted in an increase of the number of members to eighteen, and the addition of Drs. R. L. Rea, D. W. Graham, Sarah Hackett Stevenson, Marie J. Mergler, John B. Murphy, and Geo. P. Cunningham.

— The public attention to small-pox has almost entirely abated. The practice of vaccinations has decreased to such an extent that the trade in bovine virus has so far fallen off that it is impossible always to procure of local dealers a perfectly fresh article.

— A few cases of typhoid fever have occurred this summer so far, but so few compared to the number at this time last year that it encourages the hope that nothing like an epidemic of the disease is to occur. Probably at this time there are less than a quarter as many cases of this disease in the hospitals as there were a year ago, and a year ago now there were fully three times as many cases as there were two years ago. Evidence comes to us daily from the country about Chicago that the disease is generally less prevalent than last year.

Miscellany.

A REMONSTRANCE AGAINST CUTTING DOWN THE APPROPRIATION FOR THE NATIONAL BOARD OF HEALTH.

THE Michigan State Board of Health have memorialized the National Senate and House of Representatives, remonstrating strongly against the proposed reduction in the appropriation. This would be a good example for other State Boards to follow. Unfortunately the Massachusetts Board of Health, Lunacy, and Charity has no meeting until the first Saturday in August. We reproduce the text of the Michigan remonstrance: —

MICHIGAN STATE BOARD OF HEALTH, OFFICE OF THE SECRETARY, LANSING, MICH., *July* 12, 1882.

To the Honorable the Senate and House of Representatives in United States Congress assembled: —

Your memorialist, the Michigan State Board of Health, respectfully represents: —

That small-pox, diphtheria, and scarlet fever have been and are being repeatedly introduced into this State by immigrants newly arrived from foreign infected places, and by travelers who have come in contact with such immigrants; that because of the rapidity of travel, and the vast amount of inter-State travel, it is impossible for State or local boards of health without extraordinary interference with inter-state commerce to successfully quarantine against or effectually control these diseases while the United States government permits one or more of them to be introduced so frequently as of late by immigrant vessels which reach this country; that while in ordinary years the introduction of scarlet fever and diphtheria is believed to be of exceeding consequence in causing epidemics, in swelling the death-rates, sickness-rates, pauperism, and general suffering, cholera and yellow fever are sometimes thus introduced, and at the present time small-pox is causing especially wide-spread disaster in this and other Western States; that, by reason of such introduction of diseases, the lives, health, and happiness, those dearest and most important interests of our people, are constantly destroyed or placed in imminent danger from those foreign pestilences from which it is entirely possible for the United States government to afford protection; that we believe that it is the highest duty of a government to protect the lives of its citizens from dangers which threaten all, and from which no other than governmental protection is adequate; that it is with deepest apprehension that this State Board of Health learns that by reason of insufficient provisions, in the Sundry Civil Service Appropriation Bill, for the National Board of Health, the important work which that Board has lately commenced and is expected to do is likely to be crippled; that this Board believes that now, more than ever before, is a most inopportune time to lessen in any way the activity and usefulness of the National Board of Health, believing as this Board does that there is no other governmental department, bureau, or "service" so closely connected with the highest interests of all citizens and of humanity.

Therefore this State Board of Health earnestly prays Congress to grant sufficient appropriations to the National Board of Health, and to make such other provisions as will enable it to continue the immigrant-inspection service at all important ports of entry, and on important lines of travel, and to provide in every possible way for the protection of the whole country from cholera and yellow fever, and also from those contagious diseases hereinbefore mentioned which are well known as causing the most deaths and distress throughout the greater portion of this country.

By direction and on behalf of the Michigan State Board of Health. Le Roy Parker, *President*.

Henry B. Baker, *Secretary*.

THE BIRTH OF AN ELEPHANT.

Dr. Gustavus E. Sussdorff, of New York, contributes to the July number of the *New York Medical Journal and Obstetrical Review* an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was 597 days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the fœtus and after-birth, but continued four days longer. During the latter months the mammæ became swollen, and soon filled with serous milk. These were the only signs of pregnancy to be seen. The labor began at three p. m., February 2d. At this time the mammæ were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From three until eight o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer *pain*, and quietly munched some hay up to the very moment of delivery. At 8.10 the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind-legs of the mother, and touched the ground. Without waiting a moment, the mother ruptured the membranes with her two hind-feet, when the young one rolled out, on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not been seen at all, having probably been torn away during the descent of the fœtus. The mother now quickly turned to the young, and, on seeing it, began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore-foot on it and rolled it several times, as one does a lemon under the palm of the hand, the bellowing and roaring continuing. In a moment or two more she placed her abdomen upon a short post in the ground, to which she was chained, standing almost upon her head, and grasping the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes; then became quiet, and, while playing with her young, took some food. Nothing indicative of after-pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it there came about two quarts of clotted blood. There was no hæmorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed 245 pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical cord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good-sized finger for half an inch. Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to express the placenta from the uterus. He then describes the placenta and the fœtal membranes, comparing them with those described by Owen, and adds a summary of various observations that have been made of the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical characters in comparison with those of cow's milk.

OVARIOTOMY.

The thirty-fifth annual report of the Samaritan Free Hospital for the year 1881 contains various matters of interest. We refer to the report chiefly for the statistics of ovariotomy and its success during the last year. The time has gone by when any hospital or any single operator had a monopoly of skill in regard to this operation. Nevertheless, the association of this hospital with the triumphant vindication of ovariotomy as not only a safe, but a life-saving procedure, gives its operations somewhat of a special interest still. During the year 1881 there were eighty-four ovariotomies and ten deaths. Some were done with antiseptic precautions, and some without. Dr. Bantock treated his cases non-antiseptically. Of thirty-four of his cases eight died, or 23.52 per cent. Dr. J. Knowsley Thornton operated antiseptically in forty-one cases, of which only two died, and Mr. Meredith had nine ovariotomies, with antiseptic precautions, of which none died. Dr. Bantock explains in a note that five of his eight fatal cases died from causes having no bearing on the question of antiseptics — namely, two from shock and the severity of the operation, two from hæmorrhage, and one from intestinal obstruction. Even so, there remain three deaths in thirty-four ovariotomies treated without antiseptics, as against two in fifty cases treated antiseptically. The result is not otherwise in regard to other operations. Thus of eighty-seven non-antiseptic operations thirteen died; while of eighty-three antiseptic operations, or, including Mr. Meredith's, ninety-four, only five died. The tables include nine oöphorectomies; of these one died in the non-antiseptic series. It is evident that this operation will have to be undertaken with considerable reluctance and care, whether we regard the risks of it or the moral questions arising out of such a serious mutilation. — *Lancet.*

REPORTED MORTALITY FOR THE WEEK ENDING JULY 8, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Typhoid Fever.
New York	1,206,590	695	368	36.58	10.23	9.03	23.47	.86
Philadelphia	846,984	289	104	12.46	3.46	6.57	—	1.28
Brooklyn	566,689	292	162	37.02	7.88	2.05	28.42	.34
Chicago	503,304	218	108	29.31	6.87	6.87	12.82	3.66
Boston	362,535	130	41	17.69	13.91	4.62	7.69	2.31
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	244	151	48.41	1.98	2.96	37.54	.98
Cincinnati	255,708	155	89	44.57	5.17	.65	20.03	1.29
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	118	74	43.20	5.08	.85	36.42	2.54
Pittsburgh	156,381	103	56	40.77	6.80	.97	23.30	2.77
Buffalo	155,137	67	27	33.97	4.43	2.95	2.95	2.95
Milwaukee	115,578	51	30	15.68	9.80	1.96	5.88	—
Providence	104,857	30	10	13.33	6.66	3.33	—	3.33
New Haven	62,882	20	7	—	—	—	—	—
Charleston	49,999	28	12	17.85	—	3.57	—	3.57
Nashville	43,461	26	10	42.31	3.85	—	34.71	3.85
Lowell	59,485	14	4	21.42	—	—	14.28	—
Worcester	58,295	21	5	14.28	19.04	—	14.28	—
Cambridge	52,740	10	3	10.00	10.00	10.00	—	—
Fall River	49,006	26	15	7.69	3.85	3.85	3.85	—
Lawrence	39,178	16	8	37.50	18.75	6.25	—	6.25
Lynn	38,284	13	—	—	—	—	—	—
Springfield	33,340	8	2	12.50	—	12.50	—	—
Salem	27,598	10	3	20.00	—	—	—	—
New Bedford	26,875	7	1	14.28	28.56	—	—	—
Somerville	24,985	3	2	—	—	—	—	—
Holyoke	21,851	8	3	28.56	—	—	28.56	—
Chelsea	21,785	5	3	20.00	40.00	20.00	—	—
Taunton	21,213	4	1	—	—	—	—	—
Gloucester	19,329	9	5	22.22	—	11.11	—	11.11
Haverhill	18,475	5	1	—	—	—	—	—
Newton	16,995	4	3	—	25.00	—	—	—
Brockton	13,608	4	2	50.00	—	25.00	—	—
Newburyport	13,537	2	—	50.00	—	—	—	50.00
Fitchburg	12,405	7	—	—	—	—	—	—
Malden	12,017	8	2	37.50	—	—	25.00	—
Seventeen Massachusetts towns	127,330	28	6	7.14	3.57	3.57	3.57	—

Deaths reported 2578 (no reports from St. Louis and New Orleans): 1318 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 831, consumption 299, lung diseases 176, diarrhœal diseases 483, diphtheria and croup 96, scarlet fever 54, typhoid fever 46, measles 39, small-pox 36, whooping-cough 28, cerebro-spinal meningitis 21, malarial fevers 13, puerperal fever seven, erysipelas six, typhus fever two. From *scarlet fever*, New York 21, Brooklyn 11, Cincinnati six, Philadelphia five, Buffalo three, Chicago, Baltimore, and District of Columbia two each, Pittsburgh and Lawrence one each. From *measles*, New York nine, Baltimore and Pittsburgh five each, Brooklyn four, Chicago, Boston, and Buffalo three each, Philadelphia, Cincinnati, and Lawrence two each, Milwaukee one. From *small-pox*, Cincinnati 22, Baltimore five, Philadelphia and Chicago three each, New York two, Buffalo one. From *whooping-cough*, New York 12, Brooklyn, Chicago, and Charleston three each, Philadelphia two, Cincinnati, Pittsburgh, Buffalo, Salem, and Malden one each. From *cerebro-spinal meningitis*, Buffalo six, Milwaukee three, New York, Chicago, and Providence two each, Baltimore, New Haven, Lawrence, Lynn, Salem, and New Bedford one each. From *malarial fevers*, New York eight, District of Columbia two, Brooklyn, Baltimore, and Nashville one each. From *puerperal fever*, Cincinnati and Pittsburgh two each, Philadelphia, Boston, and Buffalo one each. From *erysipelas*, Cincinnati and Buffalo two each, New York and Lowell one each. From *typhus fever*, New York two.

Fifty-three cases of small-pox were reported in Cincinnati, Baltimore 17, Buffalo six, Pittsburgh and Milwaukee each one; diphtheria 15, scarlet fever nine, typhoid fever six, in Boston; diphtheria nine, and scarlet fever three in Milwaukee.

In 37 cities and towns of Massachusetts, with a population of 1,049,015 (population of the State 1,783,086), the total death-rate for the week was 16.61 against 16.95 and 12.17 for the previous two weeks.

For the week ending June 17th, in 173 German cities and towns, with an estimated population of 8,198,292, the death-rate was 26.5. Deaths reported 4173: under five 2262; pulmonary consumption 558, acute diseases of the respiratory organs 422, diarrhœal diseases 258, diphtheria and croup 153, scarlet fever 86, typhoid fever 48, measles and rötheln 43, puerperal fever 14, small-pox (Beuthen two, Flensberg, Hamburg, Cologne, Essen, and Koblenz one each) eight. The death-rates ranged from 13.6 in Munster to 40.6 in Halle a. S.; Königsberg 29.8; Breslau 33.2; Munich 25; Dresden 23.6; Leipzig 16.3; Berlin 33.5; Hamburg 22.6; Cologne 29.8; Frankfort a. M. 17.2; Strasburg 31.7.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending June 24th, the death-rate was 19.1. Deaths reported 3097: acute diseases of the respiratory organs (London) 198, whooping-cough 128, measles 106, diarrhœa 70, scarlet fever 69, fever 44, diphtheria 24, small-pox (London nine) 15. The death-rates ranged from 8.4 in Halifax to 28.8 in Preston; Portsmouth 14.5; Birmingham 15.8; Sheffield 16.5; London 18.6; Plymouth 19.6; Sunderland 23.7; Liverpool 25.3. In Edinburgh 17.1; Glasgow 25.1; Dublin 23.2.

For the week ending June 24th, in the Swiss towns, population 494,390, there were 38 deaths from consumption, acute diseases of the respiratory organs 27, diarrhœal diseases 11, diphtheria and croup seven, scarlet fever six, erysipelas four, measles three, whooping-cough three, typhoid fever two, puerperal fever two. The death-rates were, at Geneva 18.6; Zurich 16.2; Basle 27.7; Berne 22.

The meteorological record for the week ending July 8th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1882.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 2	29.678	60	74	52	80	47	80	69	SW	W	W	4	18	12	O	O	C	—	—
Mon., 3	29.869	66	77	53	65	37	68	57	W	W	SW	14	9	6	C	O	O	—	—
Tues., 4	29.945	63	71	58	60	68	81	70	N	E	NE	2	11	8	F	O	T	—	—
Wed., 5	29.811	56	60	55	96	100	100	99	NE	E	N	11	21	6	R	R	O	—	—
Thurs., 6	29.916	64	76	54	96	46	73	72	W	W	W	6	11	7	O	F	C	—	—
Fri., 7	30.047	68	80	57	70	48	70	63	W	E	SW	3	6	9	C	F	C	—	—
Sat., 8	30.027	74	88	63	57	40	78	58	W	SW	SW	7	12	12	F	O	C	—	—
Means, the week.	29.899	65	88	52				70										21.25	.72

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 8, 1882, TO JULY 14, 1882.

Greenleaf, C. R., major and surgeon Now awaiting orders, to report in person to the commanding officer, Columbus Barracks, Ohio, for duty as post surgeon at that post. S. O. 160, A. G. O., July 12, 1882.

Forwood, William H., major and surgeon. To report in person to the lieutenant-general at Fort Washakie, Wyo., on or about July 23, 1882, for duty as surgeon and naturalist on the tour of inspection and exploration to be made by the secretary of war and the lieutenant-general. S. O. 70, Department of the Platte, July 6, 1882.

Girard, J. B., captain and assistant surgeon. Relieved from duty at Fort Grant, A. T., and assigned to duty at Fort Lowell, A. T. S. O. 106, Department of Arizona, July 3, 1882.

Byrne, C. B., captain and assistant surgeon (Fort Barrancas, Fla.). Granted leave of absence for one month, with permission to leave the department and to apply for an extension of two months. S. O. 68, Department of the South, July 12, 1882.

Havard, Valery, captain and assistant surgeon. Relieved from temporary duty at these headquarters, and at post of San Antonio, and assigned to duty as post surgeon at Fort Duncan, Tex. S. O. 68, Department of Texas, July 5, 1882.

Finley, J. A., captain and assistant surgeon. Assigned to duty as post surgeon at Fort Concho, Texas (Fort McKavett abandoned). S. O. 68, C. S., Department of Texas.

Barnett, Richards, captain and assistant surgeon. To accompany the brigadier-general commanding on his journey to Forts Bridger, Wyo., and Thornburgh, Utah. S. O. 70, Department of the Platte, July 6, 1882.

Powell, J. A., first lieutenant and assistant surgeon. To report to the commanding officer, Fort Davis, Texas, for duty (Fort Stockton, Tex., abandoned). S. O. 68, C. S., Department of Texas.

Gorgas, W. C., first lieutenant and assistant surgeon. When relieved by Assistant Surgeon Havard to report to the commanding officer, Fort Brown, Texas, for duty. S. O. 68, C. S., Department of Texas.

American Medical Association. — The Committee of Publication of the American Medical Association have adopted the following rules to insure promptness in the appearance of the forthcoming volume of Transactions (Vol. XXXIII.): —

(1.) All addresses and papers read at the recent meeting of the Association, and referred to the Committee of Publication, must be in the hands of the Permanent Secretary before July 31st.

(2.) The Transactions will absolutely go to press August 5th, and all papers or addresses entitled to appear in the volume, not received by July 31st cannot be inserted.

(3.) Under no circumstances will the Committee permit new material, different from that in the original manuscript, to be added to the proof-sheets.

The following provisions of the By-Laws of the Association will be strictly enforced: —

"Every paper received by this Association and ordered to be published, and all plates, shall be the exclusive property of the Association, and shall be published for the exclusive benefit of the Association."

"Proofs must be returned within two weeks after their reception; otherwise they will be omitted from the volume."

Books and Pamphlets Received. — Double Irrigation and Drainage Tubes. Uterine Dilatation by Elastic Force. The Cure of Hernia by the Antiseptic Use of Animal Ligature. By Henry O. Marcy, A. M., M. D., Boston, U. S. A. (Reprint from the Transactions of the International Medical Congress for 1881.) London: J. W. Kolckman, 2 Langham Place. 1881.

Two Cases of Hemi-Achromatopsia. By Henry D. Noyes, M. D., New York. (Reprint from the Archives of Ophthalmology.)

The Prevention of Venereal Disease by Legislation. By Albert L. Gihon, A. M., M. D., Medical Director U. S. Navy. Read before the New York Medico-Legal Society, April 5, 1882,

Catalogue of the Baltimore Medical College, No. 93 North Paca Street, Baltimore, Md., 1882–83.

Report on Surgery. By W. O. Roberts, M. D., Professor of Surgical Pathology and Operative Surgery, University of Louisville. (Reprint.)

Atlas of Gynæcology and Obstetrics. Edited by Dr. A. Martin, Professor of Gynæcology at the University of Berlin. Containing 475 black and 37 colored Illustrations from the Original Designs by Beigel, Virchow, Hyrtl, Kilian, Naegele, Schroeder, Rokitansky, Spiegelberg, Diss, Veit, Pole, Otto Hille, and many others. Supplemented by Numerous Illustrations from J. P. Maygriers, Nouvelles Demonstrations d'Accouchements. A. E. Wilde & Co., Publishers, Cincinnati, Ohio. Folio, fifteen parts.

Fourth Annual Announcement of the California Medical College (Eclectic) Oakland, California.

Letters and Facts, not heretofore published, touching the Mental Condition of Charles J. Guiteau since 1865. Submitted to the President of the United States by John W. Guiteau, in the matter of the Application for a Commission de Lunatico Inquirendo.

Static Electricity as a Therapeutic Agent. A Paper read before the Academy of Medicine, June 15, 1882. By James Knight, M. D., Surgeon-in-Chief of the New York Society for the Relief of the Ruptured and Crippled.

Plastic Splints in Surgery. By Samuel N. Nelson, A. B., M. D., of Boston. (Reprint from the Annals of Anatomy and Surgery.)

Syphilitic Diseases of the Lachrymal Apparatus. By Charles Stedman Bull, A. M., M. D. (Reprint from the New York Medical Journal.)

The Treatment of Scars of the Face involving the Eyelids, directly or indirectly. By Charles Stedman Bull, A. M., M. D. (Reprint from the Transactions of the American Ophthalmological Society. 1881.)

Aid to Common Schools. Speech of Hon. Henry W. Blair, of New Hampshire, in the Senate of the United States.

House Drainage and Sanitary Plumbing. By William Paul Gerhard. (Reprint.) 1882.

Lectures.

THE RELATIONS OF THE FELLOWS OF THE MASSACHUSETTS MEDICAL SOCIETY TO HOMŒOPATHY AND THE HOMŒOPATHS.[1]

BY J. WINTHROP SPOONER, M. D., HINGHAM.

MR. PRESIDENT AND GENTLEMEN, — We have assembled to-day, at this our annual meeting, to celebrate the beginning of another year of our Society. The lately instituted custom of more frequent meetings has won certainly a fair measure of success. Considering the wide extent of territory over which the Fellows of this Society are scattered the meetings have been well attended, and a general interest has been manifested. With scientific discussion a fair measure of sociability has been combined.

Prevented by the exacting duties of his profession from sharing in much of the social festivity of the community, the busy practitioner is inclined to revolve in a small circle, and perhaps to take a morbid view of life. Anything that breaks this monotony, that brings the physician out of himself and in contact with men, even if perhaps of similar, but yet not identical, thoughts, serves to broaden the field of vision and to give a new view of life.

To discover and bring to your attention a new subject in fields already well winnowed is the task allotted to me this day.

The Massachusetts Medical Society, proud of its century of active, prosperous life; proud of its achievements in medicine, surgery, and collateral science; proud of its great men who have reflected their own glory upon it; proud of its high moral standing; proud of its excellent and thorough organization, occupies a position second to no similar organization in the country. Rich in the stores of ancient knowledge with the vigor of constantly renewed youth it has always, and we trust always will, represent the most advanced medical knowledge.

Our District Society, although representing but a small proportion of its membership, shares with the parent Society its honor and reputation. As a component part of one integral whole, the one must share the glory or the possible disgrace of the other.

But we live in a most progressive age, and no organization, whether professional, or political, or social, can hope for success or even for the respect of the community by simply "pointing to a record." Everywhere are seen the signs of active, progressive life. The merchant in his counting-room reads the prices at which teas are sold to-day in China. The railroad, that powerful promoter of civilization, has made San Francisco as near to Boston as was Philadelphia in the early days of the republic. Even the lightning winged telegraph in many cases has been superseded by her sister the telephone.

The public justly look for similar activity in our profession. It will not answer to say that the Massachusetts Medical Society is more than a century old; that its members have conferred lasting good upon the communities in which they have lived. The question will be asked, Is it to-day an active, healthy organization, able to carry forward and improve the work of the fathers?

The value of ancestral honors is that of an incentive to the acquirement of present and future glory. The possession of them should be considered in the light of a pledge of renewed activity. I would not detract one iota from the glories of the Massachusetts Medical Society, neither would I call in question the glorious discoveries of to-day, but rather than dwell at greater length upon points acknowledged by all to be correct, it will be better to look for a moment at the reverse picture. To discover matters, which by discussion can be improved, and which improved may increase the glory of the Society and increase our usefulness as physicians. The stream never rises above its source. The virtues of a Society cannot surpass the component virtues of its constituents.

The recent action of the New York Medical Association in regard to consultations with medical men outside of its organization, opens once more a subject which often has been discussed in our State during the past decade. I beg to call your attention for a few moments to the relation of the members of this Society to the so-called systems of medicine and their adherents. In the remarks that I make I shall refer particularly to homœopathy and the homœpaths, because this is by far the largest class of its kind, although what I have to say will apply in general to all systems of medicine.

The theory upon which the composition of our Society is founded is perfectly correct. Any person wishing to become a Fellow of the Massachusetts Medical Society must "satisfy the Censors of the Society" . . . . that he does not profess to cure diseases by nor intend to practice spiritualism, homœopathy, allopathy, Thompsonianism, eclecticism, or any other irregular or exclusive system, etc., etc.

This is the spirit of our organization, and when we are together and in conversation with each other we so regard it. But our meeting breaks up, the Fellows separate and go among the people, and at once give the lie to their professions. Who in this Plymouth District Medical Society if asked by a stranger (not a medical man) whether he is a homœopath or an allopath, would not say he was an allopath, although by such an answer he forfeits his claim to Fellowship in this Society?

Why not give an honest and straightforward answer, without equivocation, to this question? Say, "I am a physician." It will involve some explanation at first, and draw us into discussions which it may be more agreeable to avoid, but in the end it cannot fail to place us before the public in the true light, and justify us in our exclusion of the homœopaths from the Society. Their expulsion is a matter of the past. If there was a mistake it was a mistake of policy only. It is sufficient for our present purpose to state that the expulsion of the homœopaths has not solved in the least degree the problem of how to deal with homœopathy and its adherents. The same problem stares us in the face as in 1872.

Why not meet it as we meet other questions of a similar nature by weighing it in the balance and pronouncing an impartial judgment upon it. New drugs and new uses of old drugs are daily brought to our notice. Many of these uses have on their face an appearance of absurdity. Take this for example, from a recent number of the *Medical News*, which chances now to lie upon my table. Dr. Armangué reports in the *Revue de Therapeutique* "some cases of tonsillitis cured in less than twenty-four hours by the bicarbonate of soda," and in conclusion makes the following very remarkable statement: "Excision of the tonsil is a useless operation in cases of hypertrophy of the tonsils as the hypertrophy can be rapidly removed by frequent applications of the salt of soda."

---

[1] Annual address delivered before the Plymouth District Medical Society, April 19, 1882, and published at the request of the Society.

Personally I have no faith in such a treatment, but it is not simply a matter of faith but a matter of fact which must stand or fall on its own merit. If bicarbonate of soda, after a fair trial, is proved to possess the remarkable properties which the doctor claims for it we shall cease before very long to hear of excision of the tonsil, and the tonsillitome will be allowed to rust in the cases of the instrument maker, or be preserved as a relic of barbarous ages and equally barbarous practices by the collector of professional antiquities. If, on the other hand, bicarbonate of soda is found to have no effect on the enlarged tonsil, this harmless salt will be consigned to the oblivion of cundurango and chian turpentine, monuments of credulity and of blasted hopes.

So must it be with homœopathy. There is either truth in it or there is not. If there is nothing, not even the legislation of its enemies can give it a permanent existence. If there is any grain of truth, however small, it must be appropriated and assimilated by the physicians of to-day or they will be by so much distanced in the sharp competition for renown and even subsistence.

I have not investigated the subject with that degree of accuracy which would enable me to speak of it in detail. Of this I am convinced, that directly and indirectly the homœopaths have discovered or caused to be discovered new uses for many of the old drugs of the materia medica, and perhaps have introduced new drugs which may be found worthy of attention.

The more minute and extended observations of recent years have led therapeutists to study the effects of medicines in small and frequently repeated doses with, as I am prepared to show, in some cases, remarkable results. I do not refer now to the introduction of alkaloids, such as morphia and atropia, which have resulted from the refinements of chemistry, but to small (not infinitesimal doses) of the preparations which have been known to practitioners for a long period.

Aconite is a drug that has been known and more or less used by medical men from the time of Pliny. It has been used for years by the homœopaths to antagonize the febrile state. I cannot say that such a use of this drug has not been mentioned from time to time in the periodical literature of the day, but up to about fifteen years ago it had not been emphasized to such an extent as to be recognized in such of the standard works on therapeutics of that period as have come to my notice.

Stillé, in the third edition of his exhaustive treatise on Materia Medica and Therapeutics (1868), gives as the diseases for which this drug has been recommended, rheumatism, gout, neuralgia, and allied diseases. He quotes Dr. Fleming as authority for its use in rheumatism, acute and chronic, but I judge from the manner in which he refers to the subject and the doses used the drug was administered even in acute rheumatism as an antidote to the pain, as in chronic rheumatism and neuralgia. No reference is made to its effects in small and frequently repeated doses to combat the febrile state in general. That Stillé did not recognize this property of aconite is evident from his closing paragraph. He says: "In nearly all the published narratives the proof of its efficacy is far from satisfactory, or, if accepted, only shows it to be inferior to other medicines belonging to the class of narcotics."

In Wood's edition of Pereira's Materia Medica and Therapeutics (1866) there is no mention of the general anti-febrile powers of aconite. In acute rheumatism he says, "Its application has not been successful in my hands, but I have been informed of cases occurring to others in which it has been of great service."

Headland [1] speaks particularly of its use in neuralgia. He also, like Stillé, quotes from Dr. Fleming as to its use in rheumatism.

The twelfth edition of the United States Dispensatory (1868) (among twenty diseases in which aconite has been used) mentions intermittent fever, but quotes neither cases or authority. This work also quotes Dr. Fleming as an authority for its use as an antiphlogistic remedy, and especially applicable to cases of active cerebral congestion or inflammation.

As we come down a few years we find more and more stress laid upon the anti-febrile uses of this drug. H. C. Wood, Jr.,[2] under the use of aconite, says, "The first of these is to *lower arterial action* and often with it excess of temperature. For this purpose aconite is almost invaluable."

And, finally, to quote from the most recent authorities, Bartholow [3] says, in addition to other uses, aconite is "an antagonist to the fever process." It is recommended by him in "tonsillitis, acute pharyngitis, ulceration of the tonsils when accompanied by fever," "also in inflammatory states of the intestinal canal, the simple fevers of childhood, as also the eruptive fevers, particularly scarlet fever, and in acute inflammation of the cerebral and spinal meninges."

Ringer says [4] the power of aconite to control inflammation and subdue the accompanying fever is remarkable. It will sometimes cut short an inflammation. Though it will not remove the products of inflammation, yet by controlling inflammation aconite will prevent their formation, so saving the tissues from further injury." It is recommended by this author "in all acute febrile diseases, particularly of children."

These effects of aconite result from its action as an arterial sedative, and it will be found that veratrum has similar properties. It is not theoretically homœopathic. Its action cannot be explained by the dogma of "*similia similibus curantur.*"

The use of aconite is daily gaining, and it is noticed, particularly in this place, as giving a striking example of this fact that every drug of real usefulness, by whatever man or class of men introduced, will be appropriated eventually by the medical profession at large.

Arsenic, or arsenicum, as called by the homœopaths, is a favorite remedy by this class of practitioners for vomiting, diarrhœa, and other disarrangements of the gastro-intestinal canal.

Bartholow recommends it in irritative dyspepsia, vomiting, particularly of pregnancy, chronic gastric catarrh." "That form of diarrhœa which consists merely in an intolerance of the presence of food with an evacuation of the undigested aliment soon after it is swallowed is cured by arsenic." It will not be considered presumptuous on my part to add a single instance illustrating the beneficial results of arsenic taken from my own practice.

---

[1] Action of Medicine, fourth edition, 1866.

[2] Treatise on Therapeutics, 1874.

[3] Materia Medica and Therapeutics, fourth edition, 1881.

[4] Eighth edition, 1880.

A little girl, two and a half years old, who had cut all her teeth, exhibited no sign of disease except a most obstinate indigestion and diarrhœa. Pepsin, lactopeptine, mineral acids, tonics, astringents, antacids, were all in turn and ineffectually tried. Article after article was dropped from the bill of fare until only a milk diet remained. The slightest deviation from this rigid regimen would be followed by a return of diarrhœa and the passage of undigested food. The little patient, full of animal spirits, and with appetite unimpaired, rebelled against so rigid a diet. Recourse was had at this time to arsenic. I gave her three quarters of a drop of Fowler's solution every three hours. The effect was magical. The entire tone of the intestinal canal seemed to undergo a change. I was able to increase the variety of her food from day to day. The medicine was soon reduced to three times daily, and a speedy and in every way satisfactory cure was established. This case occurred last summer. There have been since then two or three relapses, but these have only served as additional testimony to the benefit of arsenic, as the health was restored at once after the use of this drug.

The twelfth edition of the United States Dispensatory, Stillé in 1866, Headland in 1866, Waring in 1874, H. C. Wood, Jr., in 1876, make no reference to these uses of arsenic, showing that these effects were unknown to them at that time.

Bartholow says, "It has long been known that ipecacuanha, in small doses, has the power to arrest certain forms of vomiting. Attention has been recalled recently to this curious fact." "A minim of the vinum ipecacuanhæ given every half hour or hour in a little water will sometimes relieve these cases in a very remarkable manner."

Mercury has been a remedy for various gastro-intestinal derangements much used by the homœopaths. Dr. Morris Longstreth, physician to the Pennsylvania Hospital, thus speaks of calomel in one-twelfth grain doses every three hours in cases of subacute gastritis or catarrhal affections of the stomach, affections attended by an increased secretion of mucus. "The sensations which the patient describes after its use — and here I am speaking of the result in numerous other cases — are, first, a relief from the feeling that has been present in the stomach; the pain is gone, though often it comes again; the burning, if there has been any, lessens and disappears; the weight or dragging is slowly removed, and a sense of comfort pervades the usually rather despondent person, and in describing the effect the hands are spread or rubbed over the stomach as expressive of comfort. Nausea and vomiting usually disappear from the first, even after a few doses of the medicine."[1]

As examples not of homœopathic remedies or of drugs used by this class of practitioners more particularly, but of the peculiar effects of small doses of well known medicines, may be mentioned iodine and belladonna. "A solution of the iodide of potassium (one to five grains to one ounce) is a useful application to the mouth in apthæ, mercurial stomatitis, simple sore throat, tonsillitis. Vomiting can sometimes be relieved by drop doses of tincture of iodine (Bartholow)."

Writing of belladonna, Bartholow states, "no remedy gives such prompt and sustaining relief in acute nasal catarrh with profuse watery secretion. To an adult five drops of the tincture are given at first, to be followed every hour by one or two drop doses."

Many more examples of the peculiar effects following small and frequently repeated doses of well known drugs might be given. Enough citations have been made to illustrate the point upon which I insist. It is not my object, neither is it possible for me now to make a complete analysis of the therapeutic value of all homœopathic remedies, or to point out the effects of all our drugs when given in much smaller doses than we habitually employ. This is a new country, of which only the outskirts have been explored, but the results there obtained from limited exploration would seem to justify further investigation. It is necessary for us to discover the wheat and chaff of homœopathy, and then we shall be able to deal with this matter.

Two objections readily occur to me in answer to the statements I have made.

First. The uses of these drugs in the manner and for the diseases mentioned are merely empirical. They are not founded on what we know of their physiological action. No counterpart can be found in the action of these drugs on the lower animals I do not deny the charge. They are empirical, that is, the result of observation. They are not in accordance with known physiological laws.

When physiology and pathology become exact sciences; when the actions of the various internal organs are as demonstrable as the theorems of geometry; when we know the essence of disease and its exact effect upon the animal organism; when we possess a correspondingly accurate knowledge of the materia medica, then the practice of medicine will become an art. Each remedy will be used with a thorough scientific knowledge of the effect to be produced, and there will be no need of empiricism.

"'Tis a consummation
Devoutly to be wished,"

but it seems as distant as the millennium. The man who depends solely on drugs whose action he can explain on physiological grounds, is heavily handicapped.

Who doubts the power of quinine over intermittent fever? Who questions the beneficial effect of mercury in secondary syphilis? Who will deny the direct antidotal power of opium in pain? Yet the discovery of the action of all these drugs was the result of observation, and although various theories of their action have been offered from time to time yet all these theories are, as far as I know, open to more or less serious objections. Some so-called explanations are not explanations at all but merely statements of theories in ambiguous language.

Even if the theory upon which homœopathic drugs are introduced is proved to be false it need not impair our faith in the usefulness of such medicines. The instances are numerous where drugs have been introduced and successfully used in accordance with a physiological theory, which theory has afterwards proved to be false. When I was a medical student we were taught that iron was to be used only to replace that mineral when deficient in the blood corpuscles. Iron was in a certain sense a food. But Trousseau has shown the absurdity of such a theory. It seems probable, as he claims, that the principal, if not the sole action of iron, is to stimulate the stomach and thus increase the appetite.

---

[1] Medical News and Abstract, vol. xxxix., No. 12.

The action of the bromides was supposed to depend on their producing an anæmia of the brain, but although this theory has been for the most part abandoned we still find that the bromides produce sleep as well as ever, and these drugs will continue to be used until replaced by something better.

Second. But why do you argue at such length on the possible usefulness of homœopathy, you may ask? The laws of our Society permit any one to use these as well as any other means for the cure of disease. True, but this you must acknowledge, that it is a custom more honored in the breach than in the observance. We are too much inclined to meet this matter with ridicule rather than as scientific men. The objection I always shall have to homœopathy is its extreme narrowness. The idea that it is sufficiently broad and general in its application to serve as a foundation for a system of medicine is absurd, and its most intelligent advocates do not believe it in their hearts. However useful we may find other remedies to be, one who has been in the habit of using them can never dispense with opium and cinchona; iron and mercury; iodide of potassium and hydriodic acid; salicylic acid and its compounds, together with a host of other remedies without which, in their customary doses, we could not practice medicine. The homœopaths, by the frequent use of many of the above medicines in their usual doses, constantly admit the needs of their own practice and its unworthiness to be considered a system of medicine.

At the risk of being tiresome I will repeat once more that it is necessary for us who claim only the title of physician to take and incorporate into our practice all that may be of service to us. The tendency both of physicians and homœopaths is to approach each other. It is for us to see that the gain is not for the homœopath.

Should the Fellows of the Massachusetts Medical Society and the homœopaths meet in consultation? To this custom I am a thorough and most emphatic opponent. Should the Massachusetts Medical Society, either from a love of possible gain, or in the hope of establishing "the era of good feeling," follow the example of the New York Medical Association and admit homœopaths to consultation, it would be the grossest error our Society has ever committed. When this step is taken we shall have reached that stage of madness which is said to precede destruction.

What is a homœopath? It has been said that it is a marked characteristic of the American people to express their opinions freely on every matter, and the less they know of the matter the more pronounced are their opinions. This is particularly the case on the subject of medicine, a question concerning which men well-informed on other topics know nothing. Yet it would be difficult to find a man, woman, or child possessed of common intelligence who is not arrayed, in the parlance of the day, either in the ranks of the homœopaths or the allopaths.

When asked for a reason of the faith that is in them they are at a loss for an answer. Some perhaps would reply, as a simple-minded, honest body once did to me. To the question, What is a homœopathic doctor? Why, she said, it is one who leaves medicine in a tumbler and not in a bottle. Another would give the equally intelligent answer, that a homœopath was one who practiced homœopathy, and to cap the climax of absurdities, homœopathy is the practice of homœopathic physicians. Indeed the homœopathic doctor would find himself a difficult subject to define. So many of his tenets have been absolutely sacrificed, so many more have been violated in spirit, that he could scarcely tell his own belief.

It may however be taken for granted that a belief in one or all of the following propositions (as stated in a recent number of the *Medical News*) is necessary to constitute a true disciple of Hahnemann.

(1.) That diseases are dynamic changes in a vital principle, or, in other words, are spiritual entities not depending upon material substance.

(2.) That the cure of disease is most easily and completely effected by drugs, the therapeutic action of which closely simulates the symptoms of the disease itself; and that the probability of a favorable result increases with the exactness of resemblance or similarity.

(3.) That the power of drugs increases with their attenuation, which may be carried to an almost unlimited extent.

(4.) That trituration or agitation confers new and augmented power upon the drug so treated.

Any person who believes these theories is too weak mentally to practice medicine or even to take care of himself. I presume in point of fact no person outside of an insane asylum could be found who in his heart believed such arrant nonsense.

A man who falsely pretends to such a belief, who for the sake of gain trades in a name, who, to ingratiate himself with the people, pretends to be what he is not, is guilty of conduct unworthy of an honorable physician, and is unworthy of the companionship of a Fellow of the Massachusetts Medical Society.

There is no such a thing as a theoretical and practical homœopath. There is, however, in the community a class of physicians known as homœopaths. A class who generally use medicines in small and frequently repeated doses. That some medicines used in this way have a certain definite action is beginning to be acknowledged by the therapeutists of to-day. That medicine used in this way is not universally effectual is proved by the fact that homœopaths often use drugs in what are ordinarily known as legitimate doses.

The main strength of these homœopaths with the public is the agreeability of their medicines. That this is a desirable point to attain, particularly in the treatment of children, will admit of no argument. The skill of the pharmacist is constantly taxed in the preparation of elixirs and emulsions in order to present to the public a medicine which at the same time will combine efficacy and a pleasant taste. The small dose tends in the same direction. I would not sacrifice the good of the patient in my endeavor to cater to the palate. But when the choice lies between an agreeable and a disagreeable drug, the efficacy of both being the same, does any one hesitate which to choose?

The position of the intelligent physician of to-day is full of promise. He may look forward with a fair amount of confidence to a useful and an honorable career. The stores of ancient knowledge, the accumulated wisdom of centuries, and all the discoveries of later years and of to-day, are at his command. Selecting from time to time from these immense accumulations such weapons as to his trained judgment seem best fitted for his purpose, he is better calculated than any of his predecessors to cope with the problems of medical science, and to confer on his fellow-men unnumbered blessings and achieve for himself an honorable name. He must be wary at all times. The pendulum swings back and forth. Yesterday we bled every one; to-day the lancet is rusting among discarded implements; to-morrow it is to be taken out and burnished anew for intelligent use.

Centuries ago, Galen, as a result of close observation, concluded that the liver produced the solid constituents of the urine, which were afterwards excreted by the kidney. This theory was laid on the shelf, and within the memory of men still young, the largest gland of the body was regarded as an organ the uses of which were unknown. But the researches of Claude Bernard, and later of Murchison, have reëstablished the dignity of the liver, and, strange to say, the crude observations of Galen have been reaffirmed.

High upon the mountain stands the physician of to-day, adding constantly to his store of knowledge, meeting and overcoming obstacles, constantly striving to reach the summit: He is above all "isms and pathies," interested in the strife of factions only so far as he can obtain benefit from it, constantly bearing in mind the injunction of Paul: "Prove all things; hold fast that which is good."

Original Articles.

PERMANENCY OF THE REST TREATMENT.[1]

BY F. W. PAGE, M. D.

A RECENT observation, that the results of the rest plan of treatment are of temporary and doubtful duration, has induced me to present for your consideration a few examples wherein the recoveries obtained and the permanency of cure cannot be questioned, both the length of intervening time and the present condition of sound health substantiating their stability.

As, however, a wide range of opinion seems to exist in reference to its applicability, before specifying individual cases it may be well to briefly consider what the rest treatment really is, what it hopes to accomplish in those cases in which it appears to be specifically adapted, and whether, after all, it actually depends, as has also been intimated, upon the superior influence of a single person possessed of unbounded confidence, unwavering determination, and unusual personal magnetism and skill, which contributes the largest element in the production of the cures so pleasantly recorded by Weir Mitchell.[2]

The peculiarity of the cases to which I refer, are undoubtedly so well known that it is unnecessary to here give their clinical characteristics; but if we will recall to mind the peculiar mental and physical traits of those who come under this form, or rather who, by virtue of necessity, are placed on this plan, all others it is assumed having by experience proved futile, we cannot but approve of the wisdom which determines the course, and which, when once undertaken, necessitates firmness and a rigid adherence to the principles involved. Yet, because of this necessity, their exhibition need not be greater than that demanded in the care and management of any fastidious person suffering from an acute disease. That is to say, that the same unbending will, associated with firmness and gentleness of manner, together with an ability to inspire confidence as well as faith in ultimate recovery, should mark the management of both classes.

Because, therefore, determination is evinced, confidence inspired, and after a protracted and variable period of careful watching, cheerful encouragement, and firm moral management, associated with the other elements incident to the plan, recovery ensues, it is hardly fair to ascribe the success to other than the method.

In the majority of instances self-will, selfishness, and a long train of anomalous sensations, aggravated perhaps by anæmia and perpetuated by foolish sympathy, which lead despairing friends in their pursuit after a panacea through the long list of homœopathy, charlatanism, and various other isms, even to the laying on of hands, and faith-cures through expectant attention, enter in as concomitant and disturbing hindrances to recovery by ordinary means. These very moral qualities have so far undermined the better attributes of the mind, and inhibited the exercise of proper self-control as to require as a legitimate moral means of cure, this so-called dominating will-power, to which exception has been taken, and to which success has been directly imputed. Rather, it may be said, that in consequence of a want of it are homes made wretched by these slavish despots, the peace and comfort of families undermined, and the patients themselves a source of endless misery and discontent.

I am aware that a want of success oftentimes attends this course of treatment, even when supposed to be judiciously carried out; but when it fails, the explanation can usually be found in either a misapplication of its details, or a misapprehension of its fitness for any particular case.

As, however, the views of medical men on any given topic vary within wide range, it is not to be supposed that even in the adaptability of any form of treatment, uniformity of opinion can exist. So here what in one case appears suitably fitted for success fails; in others a hundred successes, where failure would seem self-evident, unfold a tale as astonishingly great as they appear brilliant, and in consideration of their wide extent inevitably lead to the conclusion, that successful results are in direct ratio with a strict adherence to methods employed.

Among many practitioners I find it is customary, under a mistaken idea of the value of absolute rest, to combine a certain amount of rest with a limited amount of exercise, which is neither one nor the other, that is, it is not rest, neither is it exercise, and denominate it "rest treatment," and, as too often happens because of the ill success attending this half-way doing of things, denounce the whole plan as specious and unworthy of confidence.

To illustrate by a case what I mean, I would add that I have now under my care a lady, who for four years was confined to her room, with shutters closed, curtains drawn, and double woolen shawls pinned up to the only two windows her room contained, in order to exclude all light and sound; and who alternated her daily life between her bed, the chair, and receiving calls from interested and sympathetic neighbors, with an occasional drive, on which occasions she always wore dark-blue glasses, and from which she returned completely exhausted, though for the last eight months she had not been outside her room; and who, in consequence of shock, overwork, and prolonged emotional disturbances attendant upon the sickness and death of a member of her household, became subject to indefinable pains, nerve-tire, insomnia, and selfish caprices, so common to a certain class of hysterical females. Gradually passing from this condition through anæmia, which in itself conduces to a lack of self-control, and many hysterical phenomena, aided thereto by mal-nutrition, associated with an imperfect dietary and injudicious home management, into confirmed and helpless invalidism, she and her family naturally resorted to many means and methods to obtain a relief which came not. Finally she passed into the hands of a practitioner who placed her on a "rest treatment," or rather on a plan which comprised rest in bed for a certain period of the day, conjoined with an attempt at a generous amount of exercise, and two lunches of gruel or milk in addition to her regular meals, no restriction being placed on her attentive friends, who unquestionably did her more harm than good, and no change made in the hygienic surroundings of her room. As a natural sequence failure to benefit the patient ensued. After repeated trials of localized treatment, having as a matter of fact passed far beyond the point where local treatment as a means of cure was either wise or judicious, she was admitted to the Adams Nervine Asylum, with more or less hysterical tremor and functional motor weakness, accompanied by pain in her legs, arms, and back, which interfered with easy locomotion, circumscribed hyperæsthesia of the cervical and lower dorsal regions of the spine, cold, clammy extremities, slight degree of asthenopia, with enough of supposed photophobia to induce her to shade her eyes constantly from the light, sleeplessness, loss of appetite, and many other trivial and imaginary sensations unworthy of enumeration. On absolute rest, seclusion from friends and excitement of all kinds, and overfeeding, with massage and general faradization, she has become ruddy and strong, and beyond a slight disposition to easily tire if pushed too far or crowded too fast, is rapidly gaining apace.

---

[1] Read before the Boston Society for Medical Observation, March 20, 1882.

[2] Fat and Blood, and Nervous Diseases of Women.

This is a fair example, so far as my observation extends, of the thoroughness with which this method, so carefully laid down by Mitchell, is carried out in general practice, and which has led to unfavorable criticisms, and the unjust accusations of unreliability and instability of care. It would, however, be unfair to intimate that this is the inevitable result attending all efforts at home treatment, provided certain conditions can be secured. Experience has proved its utility, even under adverse circumstances, though more difficult and harassing to the medical attendant. Its eminent success deserves its continued trial at home, if one is willing to make the best of its accompanying discouragements, and undergo greater discomfort and solicitude; although there is no doubt that it will never attain that degree of success that absence from home, seclusion from friends and relatives, and better physical and hygienical surroundings necessarily ensures.

But in what does this treatment by rest consist, and is it permanent?

Disclaiming any idea of originality in the plan, while recognizing the difficulty of applying to practice the views of another in all its nicety of detail, upon which success so much depends, I can only here briefly state the main points that an experience of over a hundred cases has proved indispensable, and from which only that variation is needed, that tact, common sense, and the individual peculiarities of the patient deem necessary. They are, as indicated by Mitchell, rest, seclusion, over-feeding, massage, and electricity, either singly or conjoined. As the application of these principles are based on physiological reasons deduced from accurate clinical observations, it is reasonable to infer that they offer greater inducements for the relief and care of troublesome cases of nerve-tire and mimetic disease, than any other yet presented to the medical profession. Experience in this country, as evidenced by a number of competent observers, fully proves it, and results recently noted by Playfair, of London, fully confirms the evidence obtained here. Foremost and of great importance are rest and seclusion. By these agents an opportunity is afforded not only for absolute repose, so essential to these cases, until by means hereinafter described nutrition is restored, and new tissues built up; but by secluding patients from all forms of excitement, which easily tire, and from the false, foolish sympathy of friends and relatives, which engender and aggravate a tyrannous selfishness, they may be surrounded by a healthier moral atmosphere, and assisted in breaking up the pernicious habits of invalidism into which they have fallen. They are placed first in bed as a temporary resource, and judiciously fed. By so doing they speedily pass from a life of irregularity, "hurtful sympathy," "over zealous care," and from eating next to no food, into an air of comparative quiet, judicious care, "to order and control," and, above all, to a plain, "simple diet."

The period at which rest in bed is continued varies from four to six and eight weeks, the length of time depending greatly upon the character of the patient, and the ease and facility with which repose is accepted. Occasionally a patient is found in whom the disposition to accede to this condition of rest is so marked, the state of repose being so comfortable and refreshing, that when once initiated it is exceedingly difficult to overcome their aversion to getting up. To one possessed of a feeble will and laxity of purpose, the struggle to get these patients up again will be long and hard. Ordinarily but little difficulty is experienced, for with returning health and strength comes the disposition to move, and usually they promptly avail themselves of every opportunity for exercise, and gladly anticipate a change from the monotony and quiet of their rooms. Certain caution, however, in getting them up is requisite, owing to a tendency to vertigo and faintness many experience on assuming the erect position. Especially is care needed with those who have long been confined to their beds, but with patience, persistency, and determination to lift them out of their debased condition, they are soon enabled to master themselves, and over-ride their disagreeable sensations.

To overcome the ill effects of a prolonged rest, and give the weakened muscles an opportunity for judicious exercise that does not tire, as under ordinary circumstances, massage is employed. We employ massage with or without electricity. If either are deemed worthy of omission it is usually the latter. Notwithstanding the imputations cast upon massage, as being at this time especially fashionable, and of questionable value, except through its influence on the mind, there is no doubt that it possesses positive virtues as a remedial agent, and is a valuable adjuvant in all cases of nerve-tire and so-called nervous exhaustion. We appreciate its value in many joint affections, oftentimes witnessing surprising results from its use in the hysterical variety, and in cases of chronic thickening, whether resulting from synovitis or other inflammatory conditions. It is, however, equally valuable in these cases, and assists in the production of equally surprising results. Under its daily use, it is remarkable to see how rapidly a weak, feeble, and anæmic woman will gain in strength and color, and how plump her thin, flabby muscles will become under its stimulating effect, especially when conjoined with excessive feeding. Whether by rubbing, shampooing, kneading, or gently percussing with the bulbs of the fingers, the effect is the same; it acts as a mechanical tonic. The capillaries are excited to increased activity, the circulation is accelerated, the skin becomes warmer, softer, and healthier, save in exceptional instances, the muscles firmer, the tender spots, which are so characteristic a feature, become less sensitive, and gradually fade away under its persistent use, and what at first was looked upon with distrust soon becomes a pleasant muscular exercise, which induces an agreeable sense of fatigue, not infrequently followed by refreshing sleep. Exceptionally a patient will be found, who is thoroughly annoyed, and made so rebellious by its application that it is wiser to omit this part of the treatment altogether, than to persist in its use. To do so will save one much time and trouble.

The next element, which is merely an auxiliary one, is electricity, the effect of which is to accomplish what can usually be done much better by manipulations and with less pain and discomfort. Whenever applied, the induction or faradic current is more frequently used, occasionally the galvanic; with the static variety I have had no experience. In faradism, by the muscular contractions it produces, we have at command a valuable means for exercise, and especially so in those who will not walk. If taken in turn nearly every muscle of the body from the head to the feet can be brought into play, and a sufficient amount of muscular energy displayed suitable for their requirements; yet it is not always gratifying or pleasing to the patient. It is a means of great power, and needs to be used with care and discrimination not to induce painful or disagreeable sensations. Of special value in hysterical paralyses and other functional motor disturbances, it is also of decided importance in overcoming the atrophy of muscles superinduced by their long disuse.

Many patients, however, complain of it, and it is not therefore always insisted on. When applied with a weak current and slow interruptions, it is usually agreeable; in many persons increasing the temperature from one fifth to one and one half degrees. It not infrequently reddens the skin, and gives a sense of warmth and comfort to those whose extremities are continuously cold and clammy. Besides its thermal effect it in some way, not yet explained, influences nutritive changes, a fact readily noticed in the growth and repair of wasted muscles.

The last and most important part of this characteristic method of cure is the matter of excessive feeding. By it patients who before were feeble, pallid, and thin, will become ruddy, strong, and fat; while those who were living on next to no food will develop a capacity for eating, only excelled by their ability to thoroughly digest it all. As the majority are placed on a gradually increased quantity of milk, so that when on a full diet the amount consumed will vary from three to four quarts per diem (I had one patient who took considerably more than a gallon a day) administered in divided doses, in addition to the three regular meals, which are varied from day to day to avoid a monotonous diet that weakens and destroys the appetite, many will be found who will claim with considerable earnestness their inability to drink any milk whatsoever. This is commonly mere fancy. Such patients readily yield on ignoring their whimsical ideas and persisting in its use, and soon come to partake of it, with as little aversion and discomfort as any who are fond of it. Only in rare and exceptional instances does milk absolutely disagree; when it does, the different broths and soups can be substituted, although they are less advantageous and efficient in preparing the way for a larger and more expansive system of feeding for which milk is so admirably adapted.

It has often been a question in my mind in how far the watery element of milk, of which it largely consists, has an influence in laying a foundation for cure in these cases. If it be true, as Webber[1] assumes, that these nervous patients do not partake of sufficient amount of water, to either dilute and flood their tissues or carry off wasted and effete products, which in themselves act as toxæmic agents in profoundly disturbing the nervous system and its centres, then we have a ready explanation for the benefits accruing from its use, to say nothing of its value as an easily digested article of diet. Besides this, combined with overfeeding, it possesses a therapeutical value, even when administered above and beyond a patient's appetite or inclination, a fact, I hope at some future day to be able to fully demonstrate. It suffices here, however, to say, that it is evidenced in many ways, both in those who have gradually to be educated to the plan, and in those who take kindly to it. It is readily seen in the improved state of digestion and nutrition; in the rapid increase of both quantity and quality of the blood; in the growth of wasted muscles; in the development of healthy fat, and in the restoration of mental and physical power.

Fothergill,[2] in a recent work, offers the suggestion that a greater part of the nervous disturbances incident to this class is the result of nutritive defects, whereby the nervous system has lost its due proportion of lecithine, a complex nitrogenous fat found in the brain, nerves, and corpuscles of the blood[3] — the nature nor the influence of which on the nervous system, physiologists do not yet understand. If this be also true, though not yet proved, we have in this method through the nutritive functions, a ready and reliable means for its reparation. To one who has from day to day, watched the steady improvement of these cases, and witnessed new tissues built up, unstable and shattered nervous organizations quieted and reëstablished, and weak, listless, anæmic females recuperated with astonishing rapidity, the unavoidable conclusion will be that excessive feeding, under this form of treatment possesses a therapeutical value and power hitherto imperfectly realized.

As to the permanency of this plan, in consideration of what has already been stated, little need be said. In recoveries from it as from other methods and from other diseases dependent upon nutritive defects, the duration of cure so far as my observation extends, is as satisfactory and thorough as from any other. By it patients are lifted to a higher moral and physical plane. They have better blood; their anæmias are gone; their bulk increased; the chemical constituents of their fat more nearly normal; their nervous system stronger and healthier; and, generally speaking, they have learned to know and understand themselves in a way never before appreciated; a fact, which enables them to have a higher and more sensible regard for the hygienic laws of health. Much, doubtless, depends upon the temperament, mental characteristics, home surroundings, and social life with many, but with better digestion, and an improved mental and physical state, they are enabled to withstand the wear and tear of life, with as much fortitude and as little emotional disturbance as those more favorably situated; and if, perchance, again overtaken by disease are as little likely as they to be afflicted by nervous derangements, notwithstanding a law of the nervous centres, that when a series of nervous acts take place, they become stronger and stronger with each repetition.

---

[1] S. G. Webber, Arch. Med. N. Y., 1880.
[2] Biliousness and Indigestion.
[3] Foster, Physiology.

With these observations I offer the following cases condensed from the records of the Adams Nervine Asylum, all of which I have recently seen, and all, with a single exception, are perfectly well; the patients themselves regarding their recoveries as permanent, and likely to continue indefinitely, so far as they could judge. The exception is one where six months after date of discharge an acute cellulitis supervened on taking a severe cold, and imprudently wetting the feet during a menstrual period. As, however, this patient is up and about her room, and had experienced none of her former nervous disturbances either before or during this acute attack, she may, I think, be included in the list as a permanent recovery with as much justice, as though the cellulitis had supervened six months after recovery from a fracture or a pneumonia. The length of time in the several cases enumerated, intervening between date of discharge and the present, is twenty-four, twenty-two, twenty-one, fourteen and nine months, respectively.

CASE I. A. B., aged thirty-nine, naturally a bright, vivacious, and energetic woman, after the decease of her invalid mother, whose sole charge she was, and to whom she devoted many years of tender care and solicitude, in consequence of strain from over-care, anxiety, and grief, became emotional, sleepless, and easily given to tire. Endeavors to keep up and overcome her sensations by attention to household duties proved unavailing, partly from the character of the cause, and partly, without doubt, from having inherited a feeble organization; both of her parents having died of phthisis pulmonalis. All efforts at work aggravated her condition, and she soon became more emotional and irritable, had pain in her head and back, which was disseminated along the spinal column, and which also was more or less tender. She also stated she was unable to walk with ease or comfort. For two years succeeding this period she was a hopeless invalid, confined to her room and couch. During the third she sufficiently improved to admit of marriage, and was thereafter immediately taken to Europe in the hope that an entire change of scenes and surroundings might benefit her. After a protracted period she recovered, and remained perfectly well until six months ago, having in the mean time given birth to three healthy children, the labors of which were natural, rapid, and easy, and uncomplicated by any distressing sequelæ.

About six months ago, "without obvious cause," she seemed to collapse, and on the slightest exertion experienced a sense of weariness and exhaustion, accompanied by palpitation, flushing of the face, and great pain in the back of her head and neck, and considerable bilateral numbness involving both feet and hands. This in itself alarmed and worried her, and intensified all her sensations. In consequence, she became full of morbid apprehensions, was overbearing, selfish, and wakeful, was also exacting in her demands on others, and indisposed to do what was required of her. Though plump in flesh, she was pallid and weak and easily given to tire. In this condition she was admitted to my care, with an inability to read or think, with many sensitive spots along the spine, and a smarting, burning pain over the sacrum. Appetite fair, bowels constipated, and menses regular. On rest, seclusion, and full feeding, which was attained in a few days, together with galvanism and massage to back, she made a rapid recovery and has since remained well.

CASE II. C. D., a bright, intelligent married woman, thirty-four years of age, with a constitutional tendency to an unstable, nervous organization, having passed through a severe affliction in the loss of her only child, and an acute maniacal attack supervening four years later, upon a severe and prolonged flooding occasioned by a miscarriage, which was superinduced by overworking and neglect of proper medical attention while shopping in this city, endeavored by force of will to keep up and attend to her ordinary duties. The strain, however, was too much for her; her strength failed; she became pallid, listless, and dyspeptic, especially so after a severe attack of acute dyspepsia associated with persistent vomiting, recovery from which was troublesome and tardy. On admission she complained of an unending sense of tire, flatulency, inability to eat, think, or move, sleeplessness, ill-defined pain along the spine and back of her head; was anæmic; her muscles flabby, but not thin; bowels obstinately constipated, and in temper exceedingly capricious and exacting. Under firm management and treatment by rest, seclusion, etc., she rapidly gained flesh, color, and strength, as well as in moral tone, and has since continued well, a period of twenty-one months.

CASE III. L. C., an emaciated, sallow woman, fifty-two years of age, full of caprices and hypochondriacal ideas about her nervous system, stomach, and uterus. On four weeks' rest in bed with over feeding, etc., made an excellent recovery, with a gain of fifteen pounds, and has been in good health ever since, it now being twenty-two months since date of discharge.

CASE IV. E. F., an interesting but exceedingly pallid woman, forty-eight years of age, who has been an invalid for eighteen years past, or since a supposed attack of ovaritis at the age of twenty-five, the last seven of which has confined her to her room, although during the year and a half preceding her coming to the asylum she had had an occasional drive, was on admission noticed to be thin-blooded and weak, and unable to walk without fatigue or pain in the right inguinal region and a gasping respiration; a condition attributed to the combined influence of her peculiar nervous state and a medium-sized goitre. She was also emotional, sleepless, ate but little, and had a never-ending sense of weariness. She had been treated by a physician of repute for prolapsus uteri, and was wearing at time of admission a flexible ring pessary, without relief or gain in strength and endurance. On absolute rest in bed with over feeding, massage, malt, iron, and after a time cod liver oil, together with Swedish movements as she was commencing to get up, she became ruddy and strong, and on discharge weighed thirty-five pounds more than at date of admission. After her discharge she spent the rest of the winter and spring in visiting friends in New York, and on her return home continued well until the accident to which I have already alluded.

CASE V. G. H., a highly educated and cultivated lady, soon after a sojourn in Europe and four years' residence with her sister's family in a Western city, where her time was mostly spent in aiding her in the devoted care of an insane husband, began to lose flesh, strength, and color, and feel wearied at trivial causes. Walking became tiresome; doing for others more so. She oscillated between her couch and slight exertions, among other things making occasional translations from the German for publication; grew dyspeptic, ate but little, and at times became emotional and morbid in her views of life. Failing to obtain material benefit from her own physician she came to the Adams Nervine Asylum. On treatment by rest, etc., a method so well adapted for these thin-blooded, feeble people, she gained in vigor and flesh, and went away well, weighing twenty-nine and a half pounds more than when she came. She has also continued to maintain a sound state of health.

It may be objected, that the number of cases cited is too small for satisfactory proof of the position assumed in this paper. But when such proofs are founded on personal examinations after one and two years' time, the duration of cure under these circumstances must possess some value in determining the permanency of results. Other examples of cure might be adduced, but they are purposely omitted, because the fact of permanency has not been obtained since date of discharge by other than hearsay evidence.

In conclusion, though not wholly germane to the subject, it may not be uninteresting to advert to the causes which produce the class of nervous invalids to which the cases enumerated belong. As, however, the five mentioned are insufficient for practical deductions, I offer the following statistics taken from the records of the same institution: —

Since date of opening when the first patient was received, to wit, April 1, 1880, 123 females have been admitted. Of these 45, or 36.5 per cent., were housewives; 39, or .317 per cent., had no occupation; 18, or 15+ per cent., were teachers; and 21, or 17+ per cent., with the exception of five, who were nurses, were quite evenly distributed among twelve different occupations or trades.

To analyze these statistics more closely, it is found that among housewives, overwork, care, and anxiety from domestic trouble and affliction were the assigned causes, and the same is essentially true of teachers, and those seventeen per cent. who were engaged in nearly as many occupations. Among teachers, however, overwork and care for others were expressed as the larger operative causes, though legitimate work in their profession was more frequently found to be associated with a distaste rather than from a love for it, and distasteful work of any kind is not apt to be healthy work. There is too much friction in it. As expressed by one teacher, who is a highly cultivated and intelligent woman, now under my care, "It was trouble and the care of an invalid at home that broke me down, not overwork in my profession, although more branches are now compressed into the same time where a less number was formerly thought sufficient. Yet to one who is not fond of this work I can readily understand how a breakdown may occur, but not in one who really loves the work. It certainly did not break me down."

Of the 39, or .317 per cent., who did no work or had no occupation, it is a curious fact that but *one* attributed her present state of ill health to over study, and she is a Wellesley College graduate of comparatively récent date. The others broke down from underwork, or rather from leading aimless, listless, inactive lives. If these statistics afford any truthful indication of the causes which break females down and develop the peculiar nervous phenomena which are now so well known under the name of nerve tire, neuro-asthenia, or nervous exhaustion, they certainly point on one hand to the "tear of life" rather than its "wear," and on the other to the *ennui* of life, as prominent factors, and that after all, honest study and honest teaching, like all honest mental work, are absolutely conducive to sound health.

TENOSYNOVITIS:[1]

ITS CAUSES, NATURE, SYMPTOMS, AND TREATMENT; BASED UPON AN ANALYSIS OF FIFTEEN CASES.

BY WILLIAM BARTON HOPKINS, M. D.,
Assistant Demonstrator of Surgery in the University of Pennsylvania

TENOSYNOVITIS may be defined as an affection usually occurring in the forearm, and characterized by a peculiar creaking of the tendons as they move in their sheaths, depending upon a particular kind of strain to which the muscles belonging to these tendons have been subjected.

Cause. — The predisposing cause of the affection is the occupation of the individual, and in studying, therefore, fifteen cases, occurring in subjects of otherwise average health, the nature of their employment is worthy of special attention. In three of the fifteen the disease occurred in men employed in a dyehouse, whose work consisted in wringing the goods, which had been soaked in dye; in two the patients were weavers, who threw the shuttle from side to side with the index finger of the right hand; one case occurred in a baker, from kneading bread; one in a boiler riveter, from hammering; one in a car driver, from using the brake; one in an iron moulder, from continued used of the shovel; one in a plaster worker, from stirring plaster with a hoe; one in a washerwoman, from using a clothes wringer; one in a laborer, who continued to work after receiving a severe contusion of the forearm from the fall of a heavy iron pipe; and one each in a rope twister, a marble rubber, and a painter.

In contrasting the above-named occupations with many others requiring far more muscular effort, and giving employment to many more workmen than these, the idea suggests itself that it is not the mere amount of strain to which the muscles and their tendons are put that predisposes to the disease, but rather the kind of effort, which is of a tedious, continuous, monotonous sort. On the other hand, trades which would appear likely to furnish subjects for the disease more frequently than those which have been already spoken of fail to do so. This, in some instances, can be explained. Gold beating, for example, where an eight-pound hammer is used almost uninterruptedly for five hours, and is carried from above the shoulder down to the level of the waist, would seem to contradict this view, as the disease is unknown to one of the largest gold leaf manufacturers; a careful study of the movements of the operatives in performing this work, however, shows that the strain is not upon the muscles of the forearm, but rather upon those of the shoulder and arm; as the hammer descends simply by gravity and returns by recoil from the elastic block, composed of alternate sheets of gold and animal membrane, to a point where the biceps and deltoid muscles complete the elevation.

---

[1] Read before the College of Physicians, Philadelphia, June 7, 1882.

The exciting cause of the attack is usually the resumption of work to which the individual is thoroughly accustomed, after a shorter or longer interval, when he is out of practice, and when the parts involved in executing special movements have become less acttively nourished; though in the case of the washerwoman the clothes wringer was used for the first time, and the rope twister was doing work that was new to him. In the laborer the attack was of traumatic origin.

Pathology. — The means of determining the exact lesion in this disease are necessarily to a certain extent conjectural, but as the pain and crepitation are coincident in their onset and subsidence, as there is no impairment of motion after recovery has occurred, and, as the parts under treatment regain their normal condition in a very short time, it seems highly probable that there is no true inflammatory process at all, certainly none extending beyond the stage of congestion, and that the creaking which exists is due to insufficient lubrication, with consequent dryness, not, as has been supposed, to exudation of lymph. Under rest and counter-irritation the congestion very soon disappears, the synovial surfaces pour out their proper fluid, and the tendons once more move smoothly and noiselessly in their sheaths.

Symptoms. — Soreness, amounting to positive pain upon motion or pressure along the course of the affected tendons, inability to use the part, and the presence of the peculiar creaking, which is communicated to the finger on palpation, are the symptoms which denote the existence of tenosynovitis.

Diagnosis. — From its common seat upon the dorsum of the forearm this affection may be mistaken for fracture of the radius. The history of the case, however, showing that there has been no blow or fall, as a rule; the quality of the crepitus, which is much softer and finer than that of fracture, and like that of cellular emphysema after fracture of the ribs, or that produced by rubbing two pieces of cloth between the fingers, and the way in which the crepitation may be elicited, — all leave little chance of error. The disease will not be mistaken for a strain of the muscle, if a careful physical examination is made.

Treatment. — From what has been already said, it will be seen that the disease is at once acute, painful, and disabling. It, however, yields, as a rule, readily to treatment; for the patient can seldom work more than a day after he is attacked, and finding that he exhausts the usual home embrocations, without relief, promptly seeks aid elsewhere; this enables the surgeon to institute treatment before an advanced stage is reached and permanent mischief done by a deposition of plastic matter. Absolute rest of all the parts concerned is the most important element in the treatment; a palmar splint, therefore, from the elbow to the tips of the fingers is applied, when the forearm is the part affected. Counter-irritation is next indicated, and may be employed in one of two ways. If the skin is red, a band one inch broad of tincture of iodine should be painted in an oval form around the area over which creaking is felt; while a lotion of lead water and laudanum is applied within this band. In cases where there is but slight creaking, and no redness of the skin, tincture of iodine may be painted directly over the diseased part, without the employment of any lotion. The dressing is reapplied each day until all pain, tenderness, and creaking have disappeared, which generally occurs at the end of four or five days. After this a roller bandage alone is continued until the parts have regained their tone.

◆

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

ICTERUS NEONATORUM.

IN the *Lancet* for March 25, 1882, there is an abstract taken from *Virchow's Archiv*, which is interesting as showing the present state of our knowledge regarding that much vexed question, icterus of the newborn. The author says: "The mysterious jaundice which so often affects newly-born children has always given rise to much interest, and many hypotheses based for the most part on fancy rather than on fact. By some authorities its cause is referred to the liver, by others to the blood; modern theories render the former explanation the more probable, since the opinion that the elements of the bile are performed in the blood has been practically given up. Virchow believed that icterus neonatorum was merely a variety of the common catarrhal jaundice, and arose from duodenal catarrh, while Cohnheim has assumed that the bile formation of fœtal life is small, and is so suddenly increased at birth, that the bile ducts are not at first competent to carry the secretion away; neither of these assumptions rests on evidence. Another group of theories ascribes the jaundice to the disturbance of the circulation in the liver which occurs at the change from intrauterine to separate life. Hewitt and Weber believe that the distended veins compress the bile ducts, while Frerichs has adopted an old theory of Morgagni, and suggests that the sudden diminution in the supply of blood to the organ leads to a passage of the secreted bile into the blood-vessels. The theory of Breschet, that the jaundice depends on changes in the coloring matter of the blood, and is thus hæmatogenic, has been recently revived by Epstein, but it rests on considerations which are, with one exception, presently to be mentioned, even more purely hypothetical, its chief support being the feeble argument that other causes have not yet been demonstrated. This lacuna in our knowledge has to some extent been filled up by the investigations of Birsch-Hirschfeld. This author says that it is difficult to avoid associating the jaundice in some way with disturbance of the hepatic circulation on the transfer of its chief blood supply from the umbilical vein, especially when regard is had to the conspicuous congestion and œdema of the liver, well described by Weber, which occurs in cases in which the circulation through the umbilical cord is interrupted before the respiratory movements by their effect on the right heart afford an adequate compensation. It is to the connecting link between the two phenomena that Birsch-Hirschfeld's attention has been especially directed. He notes that the vessels in the hilus of the liver are surrounded by a dense layer of connective tissue, which is continued into the organ along the branches of the portal vein, and that in cases where there is venous obstruction in the liver in consequence of hindered birth this tissue is the seat of conspicuous œdema. A broad layer of gray pulpy tissue incloses the vessels, and is also seen around the umbilical vein in its diaphragmatic portion, extending also to the gall-bladder. The microscopic appearances of this tissue are those of œdema, with more or less abundant accumulation of round cells in the interstices of the tissue. That this swelling of the tissues must compress the bile ducts is sufficiently obvious, and Birsch-Hirschfeld has found that not only under these circumstances are the bile ducts distended, but there may be a positive difficulty in squeezing the bile out of the gall-bladder into the duodenum, while in the latter there is a manifest deficiency of bile. In cases where death occurs in the first day of life, beginning icterus may be distinctly detected, and the gradual increase of the jaundice in connection with this pathological condition may be observed in patients in whom life continues longer, as cases reported by Birsch-Hirschfeld demonstrate.

"A difficulty, however, in accepting this theory is presented by the fact, brought forward by the advocates of the hæmatogenic origin of the jaundice, that presence of bile pigment can rarely be demonstrated in the urine. The cause for this is not very clear; its significance, however, is lessened if not removed by an important fact ascertained by Birsch-Hirschfeld, that in fatal cases of this infantile jaundice the presence of bile acids may always be demonstrated in the pericardial fluid, whereas they cannot be found in other children who do not present jaundice. This may be taken as proof that the color depends on the presence of bile in the blood, and not on any mere destruction of blood corpuscles and transformation of blood pigment. It may also be regarded as proof of the hepatogenic origin of the jaundice. By the definite theory of Birsch-Hirschfeld all the characteristics, peculiarities, and time of development of this form of jaundice may be perfectly explained. In very rare cases, however, jaundice of a much graver type occurs in new-born children. One cause of this is a congenital atresia of the bile ducts; more frequently it is due to the compression of the ducts by syphilitic inflammation and growth, the syphilitic peripylephlebitis of Schüffel. Another form, which is extremely grave, seems to be developed by an infective process.

"The *materies morbi* enters by the navel wound, and is perhaps the same as causes puerperal fever in the mother, conveyed, it may be, by bacteria, since two forms of micro-organisms may be found in the blood of infants in this condition: spherical and small rod-shaped bacteria, probably identical with those found in septicæmia in the mouse. Further investigations are necessary to ascertain whether these correspond to two different forms of infection. Birsch-Hirschfeld's observations, however, tend to show that the rod-shaped bacteria occur especially in the form in which the disease develops rapidly as a virulent general infection, with a strong disposition to hæmorrhage. In these cases an arteritis umbilicalis has generally been found, and the conclusion has been drawn that this vessel is the channel of infection.

"In fifty cases, phlebitis umbilicalis was found in eleven, simple thrombus of the vein in four, arteritis alone in thirty-two, and inflammation of both vessels in three. Nevertheless, even when the artery alone is conspicuously diseased, the liver, as a rule, shows intense alterations, inflammatory changes in the peripheral and interacinose tissue and acute degeneration of the liver cells, which constitutes a strong reason for believing that the infection reaches the liver by the umbilical vein. After birth the varying pressure on the liver cells due to the cardiac and respiratory movements causes an alternate emptying and filling of the remnant of the umbilical vein, while the contraction of the artery arrests its own circulation; hence the conditions are most favorable in the artery for the local development of the morbid process, but in the vein for systemic infection, and the movement of the blood in the latter may explain why the local changes in it are less intense.

"Birsch-Hirschfeld describes three cases in which there was a central phlebitis of the umbilical vein and a pylephlebitis had developed at the opening of the umbilical into the portal vein, whereas the whole lower end of the former was free, a condition which can only be explained by assuming that the movement of blood in the vein carried the infectious material forward, so that its action was exerted chiefly on the portal vessels. This condition may easily escape notice in an ordinary examination. No relation is to be traced between the intensity of the vascular change and the degree of the jaundice which is so constantly associated with this infection, but the former is always intense when the changes in the substance of the liver are well marked; thus it seems likely that this jaundice is also of hepatogenic origin, and it is probably due, like the benign form, to the swelling of the peripheral connective tissue, compressing the bile ducts within the liver itself. We can thus understand that the degree of jaundice should lessen towards the close in cases of severe general infection. The conditions which favor the occurrence of the benign form of jaundice, premature birth, weak breathing, etc., also favor the development of the malignant variety, if there exists any cause for septic infection."

DIAGNOSIS OF VESICAL CALCULUS.

Volkmann's[1] investigations on the diagnosis of stone in the bladder in children is of importance to the general practitioner as well as to the surgeon especially interested in the treatment of these cases. He states that the rectal bimanual examination for stone is of great value. The patient is thoroughly placed under the influence of an anæsthetic until the abdominal muscles are completely relaxed. The bladder is to be empty or but slightly distended; two fingers of the left hand are to be carried as high up into the rectum as possible; the right hand presses upon the abdomen above the symphysis pubis and forces the bladder down towards the rectum until both hands meet. In this way even small calculi can be readily detected, but it needs considerable practice and experience to determine the size of the stone, Volkmann finding at first that the stone turned out to be larger on extraction than he had expected on examination, although distinctly feeling it between his fingers. The best way to determine the size is to lift it up on to the os pubis and hold it there; this Volkmann has done in his last four cases, the last stone which he palpated in this manner being as large as a chestnut.

---

[1] Centralblatt für Chirurgie, No. 11.

HÆMOPHILIA.

Dr. Hertzka,[1] of Vienna, reports a fatal case of hæmophilia in a boy thirteen months old; the infant was vaccinated without accident at six months; the father and an uncle were bleeders; there was no history of tuberculosis. At the age of twelve months the infant had an attack of varicella, and then began to have hæmorrhages from the mouth and nose, which increased with intervals, causing death at the end of a month.

BELLADONNA.

Dr. Jules Simon [2] appears to have had a large experience in the use of belladonna in children at the Hopital des Enfants-Malades, and his extensive use of this drug confirms the opinion that children have a great toleration for it. He found it of especial use in allaying the cough of pertussis, but his results have more significance as determining the dose which can be given at different ages than as showing definite results in the various diseases for which it was used. A boy of thirteen years with pertussis began with thirty drops of the tincture in twenty-four hours, increased to forty drops the next day, and sixty drops the following day; the latter dose was continued for ten days without any bad symptoms and with improvement in the cough. A girl thirteen years of age beginning with ten drops in the twenty-four hours, had the dose increased to one hundred and twenty drops without accident. Two boys, respectively three and four years old, took the drug in doses varying from fifty to sixty drops in twenty-four hours. Simon, however, advises giving not more than five drops in the twenty-four hours to infants of one year; between two and three years from five to ten drops; at three years ten to twenty drops, and above three years thirty to forty drops; he always divides the entire dose into at least two portions, and never begins with more than ten drops at any age.

SEED IN BRONCHUS.

Dr. Haviland,[3] of Danville, Vermont, reports the case of a boy, two years of age, who was healthy, and weighed thirty-three pounds; while playing on the afternoon of February 26th he suddenly threw up both hands, and came near choking to death before the mother could reach him. After being slapped on the back he breathed more easily, but the respiration never became normal. On the third day after the attack the symptoms were considered to be pneumonic. With remissions and exacerbations his condition remained about the same until the middle of April, when the expectoration began to be more profuse and very offensive. About the 5th of May he was having fever, night sweats, and hectic phenomena, leading to a diagnosis of phthisis by the attending physician. The temperature was 104° F., and the pulse 140. He had never been able to lie flat on his back since the beginning of the attack in February. He had not expectorated for several days, and the parents stated that when this occurred there was always high fever, which was relieved when expectoration returned. July 7th Dr. Warren opened the three upper tracheal rings, and inserted a hard rubber tube. The external incision was made nearly to the sternal notch, revealing the trachea, which was seized by tenacula. Upon being opened a gush of pus followed, the first thrown off for three days.

Owing to extreme weakness respiration failed several times during the operation, and was reëstablished with some difficulty. The patient, however, finally came out from the anæsthesia very well. During the first twenty-four hours the muco-purulent discharge through the tube was very profuse, and was estimated at more than half a pint. After two or three days there was progressive diminution of the discharge, with improvement in all the symptoms, and increase of appetite.

July 27th, twenty days after the operation, the discharge having nearly ceased, and the breathing being normal, the tube was removed, and closely following came the cause of all the trouble, a "creeper" seed. This seed very closely resembles that of the watermelon in size and shape. In the next three weeks the patient gained three and a half pounds, and by December 9th was fat and ruddy, and weighed thirty-nine pounds.

CURDLED MILK IN BRONCHUS.

Dr. S. P. Warren [4] reports the case of a little girl, two years old, suffering from the subjective symptoms of membranous laryngitis; she was a healthy looking child, and had been playing about the house all day when a choking attack occurred. The respiration was stridulous, expiration being slightly more forcible than inspiration, the voice was husky, and the cough hoarse and brazen. Auscultation showed nothing unusual in the lungs excepting a few fine mucous râles at the left apex. The temperature was normal, the pulse was rapid. Turpeth mineral was administered at once, and vomiting of partly digested food quickly followed, but the dyspnœa was not relieved. Two hours later the child sprang up, grasped its throat, was horribly convulsed for breath, and in a few seconds respiration was nearly suspended. Little by little it began to breathe very feebly again, but was moribund. Expiration was noticed to be more difficult than inspiration. A male catheter, passed through the mouth into the larynx, showed the trachea to be patent, and no obstruction could be felt about the epiglottis. Chloroform was procured to relieve a possible spasm of the larynx or bronchi, but at the second inhalation the child died.

At the autopsy the trachea was found to be free from membrane or inflammation. The left lung was greatly congested and just floated in water, the right was normal, though it contained little air. A lump of hard curdled milk, three quarters of an inch long and just large enough to slip up and down in the trachea, was found firmly lodged in the right bronchus; the smaller bronchi leading to the right upper lobe were also plugged with the same material. After the autopsy the parents remembered that the child had strangled and had had a severe coughing fit at supper three days before it died.

TETANUS NEONATORUM.

The following case, occurring under the care of Dr. Welch at the Birmingham and Midland Hospital, is interesting from the fact of recovery taking place in this usually fatal disease. A boy twelve days old was brought to the out-patient department November 4th; the infant was reported to have been strong and healthy at birth; the cord separated at the end of the fourth day, and nothing unusual was noticed for four or five days, when it began to have difficulty in sucking, its mouth seemed stiff, and its hands drawn.

---

[1] Archiv für Kinderheilkunde, Bd. xvi.

[2] Gaz. des Hop., January 5th and 11th.

[3] American Journal of Obstetrics, April, 1882.

[4] New York Medical Journal, May, 1882.

On examination it was found to be entirely unable to suck, and did not swallow anything given to it from a spoon; the hands were tightly clinched, the toes were extended, and the arms and legs stiff and flexed. The neck was not arched, but the muscles were rigid; there was some redness and hardness about the umbilicus. The little finger could with difficulty be passed between the gums. The child uttered a constant low wail. Half a grain of chloral hydrate was given, the child was placed in a warm bath for twenty minutes, and while in the bath was fed from the bottle; there was some difficulty in introducing the nipple between the gums, but this being once overcome the child sucked readily, and but little of the milk ran out of his mouth. The spasm of the muscles relaxed slightly while the child was in the bath, and it fell asleep when taken out. Three hours later it was again fed, but at least a quarter of the milk ran out of its mouth. Orders were given to keep it constantly under the effect of chloral, to feed it regularly, and to apply a water dressing to the umbilicus. The child slept fairly during the night, but the rigidity had not decreased, the lips were drawn over the gums, and the eyelids were closed and œdematous; the last time the child was fed in the night nearly all the milk ran out of the mouth. November 6th the spasm of the muscles appeared to be more painful, causing the child to cry out sharply at times. At night the child was worse. Chloral was given in one-grain doses, and a warm bath night and morning. There was rather less inflammation about the umbilicus, and on the following day there was some discharge from the umbilicus, which was softer, though still red and excoriated. The child was beginning to look pinched, and there was no improvement in the rigidity. November 8th the umbilicus was touched with nitrate of silver; during the day there was diarrhœa, for which an enema containing one minim of the tincture of opium was given in the night. On November 10th the umbilicus was looking better, and the diarrhœa was less, but watery mucus escaped from the rectum when the spasms occurred. It was found that three or four grains of chloral, in the twenty-four hours, kept the child constantly under the influence of the drug. The symptoms were worse during the night than during the day. November 12th it was decidedly easier to pass the finger between the gums, and less milk ran out of the mouth when it was fed. The arms were stiff and the hands clinched, but it cried out less frequently with spasm. The umbilicus was healed. There were double inguinal and an umbilical hernia due to the straining during the spasms. November 15th the toes were not extended; the hands were clinched, the left arm could be straightened with a little force, but the right arm and the muscles of the neck were still rigid; the mouth could be opened better, it took milk well, and slept most of the day and night. November 17th the child was more rigid, the toes were extended, and when it was lifted by its clothes it was perfectly rigid and stiff. Two to three grains of chloral were given daily from this date. From this time the child steadily improved, and on November 19th it opened its mouth when it cried. November 24th the muscles generally were relaxed, though the hands were clinched. When discharged, December 9th, the thumbs and fingers were still flexed, but could be extended with a little force and without making the child cry.

The child was seen a month after its discharge; it then looked plump and healthy, and there was not the least muscular rigidity, though it still held its thumbs and fingers slightly flexed.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

SERVICE OF DR. WILLIAM INGALLS.

REPORTED BY L. F. WOODWARD, M. D. AND H. A. WOOD.

FIVE CASES OF WOUNDS OF THE PALM FROM BLANK CARTRIDGES FOLLOWED BY TETANUS AND DEATH.

CASE I. Willie S., aged eleven, on June 13th, while playing with a cheap toy pistol, shot himself in the left hand with a blank cartridge. The wound was poulticed, and he had no symptoms until June 17th, when he woke up with pain in his back, and soon after found that he was unable to open his mouth, and that the flexors of the injured hand were beginning to assume a condition of tonic contraction. Towards night the rigidity extended to the muscles of the back and neck, and spasms of nearly all the voluntary muscles of trunk and arms occurred. Next morning the spasms became well marked, and he was removed to the hospital in the afternoon.

Examination showed a strong, well-developed boy of eleven, lying with head thrown back, legs extended, arms semi-flexed, and thumbs clinched between the first and second fingers; the left wrist was strongly flexed; there was marked rigidity of the whole trunk and neck, with spasms occurring about once every five minutes; the jaw could only be opened a small fraction of an inch; abdominal muscles were hard and board-like; there was slight opisthotonos. On his left hand on the palmar surface a little to the outer side of carpal extremity of the fifth metacarpal bone, was a circular wound about the size of a 22 cartridge, with contused, jagged edges; no redness or swelling; not tender. The probe passed downwards, inwards, and backwards for about an inch. The wound was freely incised and poulticed, and the patient put upon chloral and bromide. There was an increase in the severity and in the number of the spasms up to about the fourth or fifth day after entrance. After this they became slightly less severe each day, and traveled downwards towards the feet. Patient's strength continued good till about June 26th (eight days after entrance), when his pulse, temperature, and respirations rose together, the temperature reaching 107.2° F., and he finally died on the 29th from exhaustion, being almost entirely free from spasms for the last few hours.

CASE II. T. McG., a rugged boy of eleven years, shot himself in the palm of the left hand on July 4th. On July 5th the hand began to be inflamed, and the inflammation extended up the arm to the shoulder. On July 11th, the day of entrance to the hospital, there was a cellulitis of the whole arm, the redness extending on to the chest; the whole arm was tense, œdematous, and painful; the back of the hand was covered with blebs, the palm showed a small wound between middle and ring fingers, at metacarpo-phalangeal joint, filled with protruding granulations. July 12th a fluctuating spot on back of the hand was incised under ether, and very foul pus and pieces of wadding were let out. This abscess was found to connect with the palmar wound. The arm was also scarified, and the whole enveloped in a poultice. During the following days the arm did not improve, the back of the hand sloughed, exposing the interosseous muscles, and leaving the unopposed flexors to strongly flex the hand on the fore-arm. The skin assumed a purplish hue over the arm, and the chest, front and back, to the median line, was inflamed. On the 14th there first appeared a slight spasmodic contraction of the muscles of the affected arm, and prominence of the sterno-mastoids; there was no difficulty in opening the mouth or protruding the tongue; the number of muscles involved gradually increased until both arms, body, and neck were affected, though not severely; the patient did not cry out. On the 15th the muscles of mastication and face became affected; the head was thrown back on the body; teeth clinched, and body rigid. At the end the spasms became less severe and frequent, pulse rapid and feeble, and extremities cold, death taking place forty hours after first invasion of spasm.

Case III. J. S., aged thirty-nine, shot himself in the hand on July 4th with blank cartridge from pistol. Entered hospital on July 11th. The wound did not present anything unusual, but on July 10th he could not open his jaws. Soon after there came on a spasmodic contraction affecting the muscles of the jaw and neck, so that the head was thrown back. There was severe pain in the back, neck, and jaw. Abdominal muscles were tense and board-like.

Examination of the hand showed a small, circular wound on palmar surface, at base of index finger; superficial; no discharge. During the night there were tetanic convulsions every fifteen to thirty minutes; patient bit his tongue, and cried out with pain; the spasms lasted one to two seconds. On the morning of the 12th the spasms were more frequent, thirty-five in an hour, with opisthotonos; spasms varied in intensity and frequency (from five to eighty-eight per hour) during the day; he dozed at times; complained of sore mouth, and was at times delirious. On the morning of the 13th the spasms were less severe and fewer in number, patient becoming unconscious and rapidly weaker; at ten A. M. he had a succession of spasms, became cyanosed, and respirations stopped. Artificial respiration was practiced, and patient breathed again for about thirty minutes, when he died exhausted, but without further spasms.

Case IV. J. M., a delicate youth, aged thirteen, shot himself in the right hand with a toy pistol on July 4th. Suffered but little inconvenience from the injury until July 10th, when, on awaking early in the morning, was unable to open the mouth widely, could hardly speak, and felt great stiffness about the jaws, and pain in the neck and shoulders. On entrance, later in the day, the hand showed a small, circular, slightly inflamed wound, seated between the middle and ring fingers, its direction being vertical and nearly one half inch deep. No foreign material could be found in it.

The spasms were well marked, involving the muscles of mastication, face, neck, and body; the head was violently thrown back on the body, and the patient cried out with the pain.

These spasms increased in frequency and severity during the day and night, opisthotonos being well marked. At the very last the spasms were very severe, almost continuous, the patient was literally stiff as a board, and very livid. He died during a spasm, thirty-three hours from first symptoms.

Case V. J. J. M., aged sixteen, was shot in the left hand with a toy pistol on July 4th. All went well until the 12th, when he noticed at supper an inability to open the mouth widely, and a stiffness about the jaws. He passed a very restless night; spasms were not markedly developed until the morning of the 14th (the day of entrance to hospital), when neck and body began to be affected so severely that the patient cried out with pain, "Oh my back," and bit his tongue during the spasm. The wound was superficial, with very little discharge, located in the palm of left hand near the metacarpo-phalangeal joint of the ring finger.

Shortly after entrance the patient was put thoroughly under the influence of eserine, given subcutaneously, and in doses of one tenth to one twelfth of a grain every hour, until profuse salivation, universal tremor, involuntary dejection followed. Patient kept under the influence of eserine by one sixth of a grain every one and a half to three hours. Spasms, which on entrance were very frequent, diminished to five or ten per hour, but when the influence of the drug passed off, the spasms increased to fifty or seventy per hour. Patient lay in a quiet state, apparently dozing and comfortable, but conscious.

When this treatment had been kept up for nearly fifteen hours, patient's strength showed signs of failing, and it was omitted. The pulse was 180, and feeble; tincture of digitalis was given, after which it became a little stronger, but finally the vital forces seemed to give out, pulse became irregular, fluttering, pupils were dilated, and death occurred some two and a half days from onset.

During the course of the disease the respiration, pulse, and temperature gradually increased from 33, 120, 99.6° F. respectively on entrance to 60, 124, 104.6° F. at time of death.

◆

TRAUMATIC TETANUS.

BY CHARLES S. MILLET, M. D., ROCKLAND, MASS.

An Irish boy, twelve years old, while playing with a toy pistol that explodes blank cartridges, shot himself in the palm of the left hand. The wound, a little more than an inch in length, was between the third and fourth metacarpal bones, and parallel to them. The third and fourth fingers were contracted upon the palm, especially the little finger. Upon digital examination I found that the wound extended into the palmar muscles, but that the bones were uninjured. The boy complained of pain in the little finger, especially when I attempted to extend it. I washed the wound out carefully and drew the edges together with adhesive plaster.

This happened Saturday, June 24th, and the next day I found him suffering a great deal of pain, which had been sufficient to keep him awake during the night. His pulse was natural, but he had no appetite. I left an opiate, and called again Wednesday, June 28th. At this time I removed the plaster; the wound looked well, and seemed to be healing by second intention, though very little pus flowed from the wound. The hand had a puffy appearance, but there was no pus burrowing. The fingers were still markedly contracted. I left some permanganate of potash, with directions to apply it constantly to the wound. I did not see the boy again until Monday, July 3d, when the hand was found in about the same condition as when I last called. The wound had a pale blue appearance, and there seemed to be some exuberant granulations at one end of it. They told me that his appetite was very poor, and that he slept but little, so renewed the opium and prescribed a stomachic tonic containing some iron. The next day, July 4th, the boy ran away to a picnic, about two miles distant, and while there had some sort of a spasm which compelled him to return home immediately. I was not sent for, but another physician was called in for "an opinion," who said everything necessary was being done, and left him bromide of potash. The next day he was about the house, but while coming down-stairs had another paroxysm and fell, cutting a long gash in his chin, which wound, however, began to heal at once by first intention. Nothing more was done for the boy that day, but the next afternoon, Thursday, July 6th, I called according to agreement, not having heard that the patient was worse.

He was tetanoid, and opisthotonos was present to a marked degree. Temperature 100° F.; pulse 90, strong and full. The temperature was not taken again, because the spasms prevented. I got him to take in milk, by means of a glass tube, one gramme of bromide of potash and one half gramme chloral, and ordered it repeated every two hours. He could not open his mouth more than half way, and large drops of sweat were on his forehead. The paroxysms occurred every fifteen minutes and lasted two or three. In the evening the wound was washed out carefully, and a poultice applied. The wounded hand was in a peculiar state of tonic contraction, the hand being drawn back at right angles with the forearm, while the fingers were rigidly flexed upon the palm. In addition to the foregoing medicine I now ordered fifteen drops of the tincture of physostigma every two hours. He was now sleeping some between the paroxysms, which were no more frequent or severe. His mind was perfectly clear, and he told me that his mother had not obtained the medicine which I had prescribed the Monday previous. He had voided his urine during the evening; his pulse was between 80 and 90. I called at six A. M. Friday morning, when it seemed to me that the paroxysms were not so severe as they were the day before, though he continued to call upon his attendants to pry his mouth open with a spoon when he felt the spasm coming on, as he had done the day before. From about nine o'clock until between one and two P. M. of Friday the boy suffered from no spasmodic contractions, was wide awake, and could open his mouth quite wide; opisthotonos and pleurosthotonos however were still present. After that time the spasms returned, but not quite so severe as they were the day before. I continued the same remedies, increasing the physostigma up to twenty drops. I was unable to get the boy to take any liquor, probably because he had seen the evil effects of it at home. His pulse was 80, regular, and not at all thready. In the evening the paroxysms were occurring oftener (about every five minutes), but he slept between them. The wound was dressed for a third time that day, but I could not notice anything peculiar about it. Some pus could be caused to flow from it, and granulations were not exuberant. Saturday at six A. M. I saw him again. He was semi-comatose, and his face and neck became cyanotic during the paroxysms, which were longer than the intervals between them. His pulse was only 80, and his body showed but little emaciation (he was a fleshy boy), and that mainly in the countenance. At ten o'clock that forenoon he died in a paroxysm, asphyxiated.

It now seems to me highly probable that the superficial palmar branch of the ulnar nerve was injured, since the wound was in its immediate neighborhood, and because the third and little finger were clonically contracted from the first. There was nothing about the appearance of the wound, however, which would lead me to think so.

In another case with a similar wound I would see the case oftener, notwithstanding any scruples the parents might have. It is a question in my mind whether or not the cessation of the paroxysms during a part of Friday was due to the medicines given.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY M. H. RICHARDSON, M. D., SECRETARY.

TORTICOLLIS.

DECEMBER 19, 1881. DR. BRADFORD showed a patient with torticollis, operated on a week before by tenotomy of the sterno-mastoid. The patient was wearing an appliance for correction of the position, first described by Mr. Swan, of Dublin. This consisted of straps fastened to the head, and secured to buckles placed in a plaster jacket which held the trunk. A light plaster bandage was applied with the patient in a standing position, encasing the trunk and passing over the elevated shoulder. To prevent the bandage from being pulled upwards padded perineal straps were used, and the plaster "case" was sufficiently secured. To prevent the head from slipping within the bandage intended to hold it rubber adhesive plaster was applied to the patient's forehead and cheek, and bandages sewn on to the end of these. The bandages were then wound about the head, passing under the chin, and sewn together. Strips of webbing were then sewn to the bandages at such points as it was found necessary in order to hold the head in any desired position. The number of straps as well as their position and that of the buckles varied in different cases. As a rule Dr. Bradford had found three straps needed in each case.

In these three cases in which the appliance had been used it had been found effective in two; in one, owing to imperfect application, it had not appeared thoroughly efficient, and a steel apparatus was used. The great merit is that it can be easily applied, and that the surgeon is entirely free from the instrument maker.

Dr. Bradford showed also a leather jacket worn by a patient with caries of the spine in the lower dorsal region.

DR. LANGMAID said that in these cases the simple home-made apparatus seems to be better than the more expensive and complicated appliances formerly used. These things argue well for the perseverance and ingenuity of those who are working for the correction of these deformities.

DR. PARKS said that when he was resident physician of the Children's Hospital of Philadelphia, elastic apparatus was used for curvature of the spine. He settled down at last to taking stiff, thin board, which did much better than anything he had ever seen before.

DR. LAWRENCE read the regular paper on

PHONIC PARALYSIS WITH RAPID RESPIRATION.[1]

DR. LANGMAID said he was much interested in the rapid breathing, and inquired whether the reader had found any proper explanation for it. It seemed to him very extraordinary indeed. The persistence was the remarkable thing about it. He wondered whether there was any connection between the aphonia and the rapid respiration, and if there was whether there might not have been some nervous lesion impossible to discover in the respiratory centres.

DR. LAWRENCE said that he thought such an explanation possible. It certainly occurred to him that some lesion of the respiratory centres in the medulla might have occasioned this peculiar symptom.

DR. DEBLOIS said that he made several examinations of this case. There was one thing which he noticed with regard to the paralysis, and that was partial movements of phonation. The arytenoid cartilages moved, and the cords partially approached each other, then they were arrested, and the edges were considerably relaxed. He thought the whole case could be accounted for on the theory that there was a tumor or growth pressing on the trachea or veins supplying the larynx.

Recent Literature.

Medical and Surgical Reports of the City Hospital of the City of Boston. Third Series. Edited by DAVID W. CHEEVER, M. D., OLIVER F. WADSWORTH, M. D., and A. L. MASON, M. D. Boston: Published by the Trustees. 1882. Second Notice. Medical Papers.

Dr. Stedman's article on Typhoid Fever is based on 1036 cases, admitted during the ten years between January 1, 1871, and January 1, 1881, with a percentage of mortality of 17.9. Adding to these 152 cases treated during the previous five years by Dr. Upham, with a mortality of 13.8 per cent., we have a total of 1188 cases, with 207 deaths, or 17.3 per cent. Deducting from the whole number of cases 32 which were admitted moribund, and dying within forty-eight hours, 1088 cases give a mortality of 16 per cent. When we remember that a large proportion of these patients did not come under hospital treatment until they had been sick several days, and that in many instances their mode of life and hygienic surroundings probably unfitted them for resisting the effects of a grave disease like typhoid fever, these results will compare favorably with those of other hospitals. The details of seventeen cases, with autopsies and temperature charts, are appended. Dr. Stedman's hospital experience leads him to the opinion that while the temperature is an invaluable guide in diagnosis, more certain indications are furnished by the pulse in respect to prognosis and treatment. He has seen no patient die whose pulse has not reached 120 twenty-four or more hours before death. The treatment chiefly relied upon in cases with rapid pulse is stimulant, brandy being given in large amounts (in one case twenty-four ounces in twenty-four hours) with apparent benefit. The cold bath was employed, but not in a sufficient number of cases to afford decided results, and Dr. Stedman says, "If I were restricted to one remedy and one drug in the treatment of typhoid fever, I should choose the sponge bath and brandy for my pharmacopœia." Our space does not allow us to allude to other points in this interesting article which may be read with profit by every medical practitioner.

A Synopsis of Fifty Medico-Legal Autopsies, by F. W. Draper, M. D., includes post-mortem examinations in fatal cases of abortion (criminal), drowning, strangulation, suffocation and smothering, asphyxiation, poisoning, cold, gunshot and other wounds, rupture of viscera by external violence, and sudden death from natural causes. The well-known ability of the reporter renders this series a valuable contribution to medico-legal science.

A Synopsis of Gynæcological Cases, by Dr. G. H. Lyman, includes cases of most of the various diseases of the pelvis and its viscera common in women, which were in the hospital during the five years preceding January 1, 1881. The article will prove of much interest to those practicing this branch of medicine, and shows the vast amount of benefit which a large and well officered hospital can confer upon women of the lower and middle class who are suffering from uterine and ovarian diseases so common among them, and often so disastrous in their results unless treated with skill. Among the various diseases treated we can only briefly state that there were sixteen cases of puerperal septicæmia, seventy-six of abortion, fifty-two of disorders incident to pregnancy, one hundred and one of endocervicitis, six of hematocele, one hundred and forty of pelvic effusions, and many others.

Dr. R. T. Edes's article on High-Pressure Education; its Effects, is a suggestive essay upon one of the most discouraging class of maladies which medical men have to do with. The frequency with which "nervous prostration," or neurasthenia, as it is now often called, is met with among young women engaged in teaching, or who have recently graduated as scholars from our public schools, has suggested to Dr. Edes that excessive mental application is often the exciting cause of the disease. He gives brief outlines of thirteen cases, in which the patients, either as teachers or scholars, had been subjected to long-continued mental strain, sometimes, and probaably very often, under unfavorable hygienic influences. We wish a copy of this article could be sent to every member of the Boston School Committee, and we hope that it may lead to the appointment of a Medical School Inspector as the first step in the reformation of the glaring neglect of hygiene which is the source of so much injury to the pupils in our schools.

Cases of Diphtheria, Winters of 1880 and 1881, under the care of Dr. Hall Curtis, give the details of thirty-nine out of forty cases, of which six died. Almost all of them came from houses on "made" land, where the soil is damp, and a majority of them from houses where other cases of diphtheria had occurred. The patients were placed in detached wards, each holding from one to four beds, with free ventilation and plenty of sunlight; the air was kept moist by carbolized steam; food and stimulants were regularly given.

---

[1] See JOURNAL of July 22.

"Tincture of the muriate of iron and chlorate of potassa in glycerine and water as a vehicle, with salycilic acid, formed the treatment, while dry cold, in the shape of an icebag, was kept to the throat externally. Every two hours the pharynx was thoroughly painted with compound tincture of benzoin."

Notes of two Cases of Uterine Fibroid, by Dr. O. W. Doe. The first case was that of a large tumor which was removed by dilating and incising the os, dividing the mucous membrane covering the growth, and stimulating uterine contractions by administering fluid extract of ergot. In consequence of septicæmic symptoms the expulsion was finally completed by extraction with the vulsellum. The patient did well. The other case illustrates the great difficulty sometimes found in diagnosticating uterine fibroid, some of the conditions resembling those of pregnancy, while in other respects it appeared like a fibrocystic tumor. The extremely prostrated condition of the patient seemed to render operative interference unjustifiable. She died from hæmorrhage, and the autopsy showed the disease to be an interstitial fibro-myoma.

In An Analysis of Two Hundred Cases of Primary Pleurisy, by Dr. A. L. Mason, (not including those which are consequent upon other forms of chest disease, nor those of empyema) several interesting facts are brought to light. In regard to ætiology it appears that the number of admissions in August was greater than in any other month except May; and while exposure to cold and wet, especially when coincident with drunkenness, was considered an exciting cause in about a quarter of the cases, still more than half remain without any assignable cause. It would have been more satisfactory if a report of the condition of the urine (density, daily amount, presence or absence of albumen and casts) had been added to each case, in order to ascertain, if possible, whether the pleuritic inflammation could have had any connection with renal disease.

Tapping was performed one hundred and twenty-two times in seventy of the whole number of cases, "with no unfavorable result which could be attributed to the operation in any instance, but usually with great and permanent relief." "The danger is not in the operation, but from the delay in performing it, or from some coincident malady on the part of the patient." In six cases effusions which were serous at the earlier tappings later became purulent, and required incision and drainage.

Cases with Autopsy, by Dr. E. G. Cutler, pathologist, include two of ulcer of the duodenum. In one of them, fatal from hæmorrhage, there was congenital absence of the left kidney and ureter. The other was complicated with cancer of the œsophagus with perforation into a bronchus. A large cavity was found in the right lung filled with fluid similar to that contained in the stomach. It was evident that a portion of the contents of the stomach had been forced up through the œsophagus into the bronchus, and that the disorganization of the lung was the result of post-mortem digestion. The abdomen was distended by a large volume of gas in the peritoneal sac, the result of a perforation of the duodenal ulcer. Two cases of aneurism of the cœliac axis, with rupture; one of aneurism of the aorta, bursting into the left auricle; one of chronic parenchymatous nephritis with hydronephrosis of the other kidney; and one of sporadic cerebro-spinal meningitis complete the list.

12

The Third Series of the City Hospital Reports compares well with its predecessors, and attests the industry, zeal, and skill of its compilers.

A Manual of Ophthalmic Practice. By HENRY S. SCHELL, M. D., etc. Philadelphia: D. G. Brinton. 1881. 263 pages.

The author's object, to state briefly the generally accepted principles of ophthalmology, and to describe those methods of treatment upon which he has become accustomed to rely, from personal experience of their value, has been accomplished in this manual with a good degree of success. Whether the multiplication of manuals, however, is of much advantage to the student or practitioner seems to us a question.

But there is one principle stated here to which we must take exception. On page 75 we are told, "To see into an ordinary eye we need the assistance of rays coming from some luminous point. But when the organ is lighted by a candle, the rays, proceeding outward again from the brilliant image on the retina, go back to the candle. This is in accordance with the *law of conjugate foci*, upon which is based the theory of the construction of the ophthalmoscope." Then follows an illustration showing conjugate foci.

This is at least misleading. The rays coming from the illuminated retina go back to a focus at the candle flame only if the eye be accommodated for the distance at which the flame stands. Now such accommodation is not only what does not ordinarily take place when the ophthalmoscope is used, but is precisely what, for more than one reason, it is desirable to avoid. In one limited sense only, and under certain conditions, may the construction of the ophthalmoscope be said to be based upon the law of conjugate foci. If lenses be employed, and they be considered as part of the instrument (as they properly may be), then the retina of the observed and that of the observing eye must be at the conjugate foci of the combined dioptric system, that is, the system made up of the refractive media of both eyes and of the lenses used. In this sense the construction of any optical instrument might be said to be based on the law of conjugate foci. But if no lens be employed, as with the direct method, both eyes being emmetropic, then the law of conjugate foci has absolutely nothing to do with the construction of the ophthalmoscope.

Electricity in Surgery, By JOHN BUTLER, M. D. New York: Boericke and Tafel. 1882. Pages 109.

The author gives very minute directions in regard to the use of electricity in surgery, and very properly insists upon its being used with some regard to the laws of electricity. The object he has in view "is to supply the deficiencies of our literature, aiming at the attainment of absolute precision in cases treated by electro-puncture, and as far as possible in those treated by external or surface applications, basing conclusions on the fundamental laws which govern electricity upon the effects which have been observed produced by certain quantities of current upon the living organism, upon organic material, and upon the chemical decomposition of inorganic matter, and upon clinical experience." The use of electricity in all the varied surgical operations in which it has been used is considered more or less briefly. In reading the book one is many times conscious of the author's estimate of himself.

Medical and Surgical Journal.

THURSDAY, JULY 27, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

TOY PISTOLS AND TETANUS.

THE present issue of the JOURNAL contains interesting accounts of several cases of the series of fatal results from toy pistol wounds. The number of fatalities in the country at large was very great last year, but this particular portion of it was free from the scourge. We took occasion at that time to call attention to a popular misstatement in regard to the matter, criticising the exaggeration, but sympathizing with the condemnation of the pistol. This year we can no longer boast of immunity. Since July 1st there have been reported at the office of the Board of Health up to July 25th eight cases of death from tetanus following toy pistol injuries. At the State Board of Health there have been reported from different parts of the State seven cases and seven cases of tetanus in which the nature of the original injury is not specified, but judging from newspaper accounts some of them at least are the result of toy pistol wounds.

Such wounds are not invariably followed by tetanus. At least two such cases have been seen this year at the Boston Dispensary in which no unusual result followed. No case is known to have recovered from the tetanus when once it has supervened; in one case now at the Massachusetts General Hospital the result is not yet declared.

The newspapers report more cases than are represented by the official returns. The actual number is by no means easy to get at with our imperfect machinery of registration, but the certainty is enough to mark the weapon as murderous. It is not so easy as one would imagine to describe the toy. It is for sale only in out-of-the-way localities, and clandestinely, and the victims of the weapon seem to be inspired by the same rapidity of action as the owners of dogs supposed to be mad. According to the best information obtainable it is a cheaply made affair, with a short barrel, and explodes a metallic cartridge, differing in nothing so far as appearance goes from an ordinary 22 cartridge, except in the absence of the ball. Of course there is nothing about it that makes the use of ball impossible. Being cheaply made — it is sold for twenty-five cents — the mechanism of its lock is not perfectly trustworthy. In one case the victim, according to his own description, was holding the pistol at half cock behind him in his right hand with his left hand also behind him, to give his attitude a more natural appearance, and in close proximity to the toy. He supposed that his pistol was as safe at half cock as a shot-gun, but without his being conscious of any action on his part it exploded and wounded him. Another boy described it as having so short a barrel that in manipulating it the left hand naturally took a position in front of the muzzle, where his own was in the act of cocking when the hammer fell and exploded the cartridge. The cartridges, or at least some of them, are closed by a pasteboard disk which occupies the position of the ball, but which evidently has but a feeble penetrating power, as it is sometimes found just beneath the skin, and sometimes is not found at all. In none of the cases of which we have personal knowledge has the wound extended from palm to back through the hand. This little murderer is very different from the toy with an unbored semblance of a barrel which explodes a percussion wafer. That plaything, though it has been described as the cause of these numerous fatalities, is, we believe, so far falsely accused, whatever its possibilities may be.

Tetanus is a rare disease in this vicinity; probably many a practitioner of wide experience, whose hair is already gray, has never seen a case. Why it should follow this particular wound is, of course, a question asked many times by both physician and layman, to which no perfectly satisfactory answer can be given. It is possible that the cases of tetanus are comparatively few compared with the total number of wounds of this general character. Unless complicated the injury is not painful enough to enforce surgical assistance, there is no bullet to extract, and it may be that a large number are left without ever seeing a surgeon.

The atmospheric conditions, often supposed to stand in a causative relation to tetanus, can scarcely be said to be present. The wound is certainly of a class popularly thought to be most often followed by locked-jaw, namely, a penetrating wound of hand or foot.

The charge is received just at the muzzle of the piece, immediately on its exit from the barrel, before it has had time to spread. An examination of a recent wound demonstrated the shallow interior cavity to be larger than the wound, showing a tendency of the charge to spread after entering the hand. The slight residue of powder, which, even in the smallest charge, blackens and burns the object in close proximity, together with the wadding, is carried into the hand and left there. When a charge is imperfectly confined, as in these blank cartridges, combustion is less perfect, and the residue to be carried into the wound is greater than with ball cartridge. A pistol ball which actually perforated the hand would be much less dangerous.

These are common facts, known to every surgeon, and perhaps useless to print in a professional journal, but they seem to show that the wound is an unusual one, and suggest a more rational explanation than any inference drawn from the supposed character of the explosive or the relative humidity of the atmosphere.

— Mr. Thomson, of Dublin, has recently tied the innominate for aneurism. On the twentieth day after ligature the tumor was reduced in size by an inch in its long, and half an inch in its short, diameter.

THE TENTS AT THE BOSTON CITY HOSPITAL.

OF the many lessons of the War of the Rebellion one of the most striking was in regard to the superiority of open buildings and tents for hospital purposes. A practical application of the lesson has been made for many years at the Boston City Hospital. An inspection of the tents in use during the present summer will convince the visitor of the practical benefits to be derived from such a temporary addition to the permanent structure. There are at present in use two large tents, each sixty by twenty feet, and several smaller ones which furnish separate quarters for patients in need of isolation, and which altogether accommodate about fifty beds. They are floored with a carefully matched and well made floor, raised from the surface to allow circulation beneath; furnished with a fly which forms a second roof with a layer of unconfined air between the two surfaces of canvas; water is brought close to hand by a connection with the city water works, and connection with the sewers is made in a temporary building perfectly separate but conveniently near, and gas furnishes at night the necessary illumination. All the appliances of the hospital proper are of course at the disposal of the staff on duty in these temporary structures. The service for the twenty-four hours is performed by a corps of nine ward tenders and nurses. Ventilators at either end allow the escape of the heated air of the upper stratum, both ends are left widely open, allowing free circulation of air, and, in fact, the patients may be said to be placed in the open air on a dry flooring, and sheltered from the sun and rain.

The advantages of such free access of the outer air has been abundantly demonstrated over and over again. No claims of miraculous results are made by the hospital authorities, but, as a rule, wounds do well, patients recover quickly, and there is an entire absence of hospital epidemics. One of the principal advantages, perhaps the greatest, of these additional wards, is the effect upon the ordinary wards of the pavilions; overcrowding is entirely done away with, and during the summer each ward can in turn be vacated and left entirely unused for an indefinite period, to be cleaned and aired without disturbance or haste to reoccupy it. Thus the effect of this out-door camp is not limited to the patients who actually sleep beneath the canvas, nor to the summer season, but the benefits are continued the whole year round, and are shared by each and every one of the inmates.

The entire cost of these large tents, fully equipped and ready for use, is a trifle more than three hundred and fifty dollars, a comparatively small sum when we remember that the tent itself is good for more than one year's occupancy.

One item not to be neglected in estimating the advantages of such an arrangement is the moral effect upon the patients themselves. The novelty of the situation, the easy approach to the green grass, and the general fascination of camping out, makes the tents very popular.

The use of tents in connection with civil hospitals is by no means new. In Russia the employment of temporary barracks in summer is said to be a long-established custom made necessary by the extreme changes from winter to summer, and tents have been used, in time of peace, to a certain extent, by most of the military nations of Europe, while in other cities of this continent tents or temporary structures have been employed on various occasions, but we doubt if their use is anywhere carried to greater perfection or made more systematically beneficial. Whatever may be said about the originality of their use as an adjuvant to permanent structures, there can be little doubt of their utility. We draw attention to it because it seems sometimes, when we watch the erection of costly permanent buildings, as if the lessons of the war were forgotten, and the application of tents to various civil uses was likely to be overlooked, and good works left undone which might be accomplished at small expense by their use.

◆

THE SPREAD OF INFECTION BY RAGS.

THE danger of the spread of infection by rags becomes interesting to the general public, and especially to the owners and operatives of paper mills after the active prevalence of such a disease as small-pox in those foreign and domestic centres from which the rag supply is drawn, small-pox being the disease which in the past has been most often and easily conveyed by rags, and which is most likely to be in the future, at the same time that it is the disease to which rags of late have been exposed.

A recent outbreak of small-pox among the rag-sorters in the paper mills at St. Mary Cray, in Kent, England, was the cause of careful inquiries into this subject by the medical officer of health for the district and by an officer of the local government board, Drs. Baylis and Parsons, the results of which as given in the latter gentleman's official report are published in the *Practitioner* (London) for June.

Dr. Bristowe's report, in the Eighth Report of the Medical Officer of the Privy Council, 1866, is freely quoted from, and the general literature of the subject carefully reviewed and compared. Dr. Bristowe, after visiting eighty-six paper mills in different parts of England, arrived at the conclusion that small-pox and other infectious diseases are very rarely introduced into paper mills by rags, but that their introduction was possible and occasionally did take place, and cited several instances of small-pox attacking operatives in paper mills, of which he related the particulars. In the annual reports of medical officers of health between the years 1875 and 1880 inclusive, eight instances of similar outbreaks of small-pox among paper mill workers, where the surrounding districts were free from the disease, and no communication with any previous case was discoverable, are recorded. In addition to these Dr. Parsons had brought to his own notice four or five other recent instances. In all these cases small-pox was the disease conveyed.

Among other reasons why infection is not more frequently spread by rags Dr. Bristowe gives the following: Before the rags reach the paper mills they have been sorted two or three times and exposed to the atmosphere; the preliminary dusting which rags undergo in some mills tends to deprive them of any infection they may have retained, unless the dust shaken out of the rags be allowed to diffuse itself in the air of the work-room; it is only during the preliminary stages of paper making that danger can exist, the boiling and chemical treatment to which rags are subjected after cutting rendering them innocuous in the later stages of manufacture; rags are usually kept a considerable time in stock before use; only the paper mills engaged in the manufacture of the finer classes of paper incur much risk of infection; in any case the proportion of infected to uninfected rags is very small, and the majority of workers are more or less efficiently protected against small-pox by vaccination, and against measles and scarlet fever by previous attacks in childhood.

After a consideration of the various means proposed for protecting rag workers and disinfecting rags, Dr. Parsons recapitulates his conclusions as follows:—

"(1.) That cases of infection by means of rags do occasionally occur, although, comparatively speaking, not very frequently.

"(2.) That small-pox is the disease most likely to be thus conveyed.

"(3.) That all rag workers should be vaccinated and re-vaccinated.

"(4.) That dust should be avoided. The preliminary dusting of the rags before sorting is to be recommended, but the dust should not be allowed to contaminate the air of the work room.

"(5.) That certain measures of disinfection are available, among which exposure to air, fumigation with sulphurous acid, and exposure to hot air or high pressure steam may be mentioned, each of which has its advantages and drawbacks under certain circumstances.

"(6.) That in the absence of means by which it may be known whether or not rags have been infected, the cases in which disinfection would appear specially desirable are (*a*) rags from places where epidemics are known to exisit; (*b*) rags in a filthy state; and perhaps (*c*) foreign rags, especially if coming within the two previous categories.

"(7.) That under existing circumstances it is not advisable that any obligation as to disinfection of rags, other than that already imposed by section 126 of the Public Health Act, 1875, should be imposed upon persons engaged in the rag trade."

The section of the Act referred to imposes a penalty on any person who gives, lends, sells, transmits or exposes without previous disinfection any bedding, clothing, rags, or other things which have been exposed to infection from any dangerous infectious disorder. The difficulty in the enforcement of a penalty under this law is, of course, to prove a knowledge of infection on the part of others than the original possessor.

The Health Department of the Massachusetts Board of Health, Lunacy, and Charity called attention to this subject of the distribution of small-pox by rags in paper mills in a circular issued in January of the present year, from which we extract the following:—

> Within the year 1881 small-pox in several towns of the State was evidently propagated from the rag-sorting rooms of paper mills. While it is probable that no very satisfactory method of disinfecting rags can be adopted at present, it is yet possible to give the operatives in these mills and their families the best protection known, and that is vaccination. It is, therefore, recommended that employment should not be given in paper mills to persons who cannot satisfactorily show that they themselves and their entire households have been thoroughly vaccinated.
>
> The section of General Statutes above referred to is as follows:—
>
> "Sect. 30. Incorporated manufacturing companies, superintendents of almshouses, State reform and industrial schools, lunatic hospitals, and other places where the poor and sick are received, masters of houses of correction, jailers, keepers of prisons, the warden of the State prison, and superintendents or officers of all other institutions supported or aided by the State, shall, at the expense of their respective establishments or institutions, cause all inmates thereof to be vaccinated immediately upon their entrance thereto, unless they produce sufficient evidence of previous successful vaccination within five years."

MEDICAL NOTES.

— A singular instance of *reinvention* is set forth in the Philadelphia *Medical News* of July 15th, wherein a distinguished Philadelphia surgeon describes and *figures* as his own invention, "entirely new" to him, "a canulated needle for introducing wire sutures." Exactly the same instrument has been in the possession of surgeons here for a quarter of a century. Recently, June 17th last, one having two needles of different curves in one handle, obtained from Luer, Paris, 1860, was given by one of our fraternity to another as a curiosity and *souvenir*. The figure in the *News* might have been taken from this very instrument.

— A case has just been tried in Dublin against a medical student who had attempted to induce a gentleman, Dr. Morris, to personate him at a Dublin examination, offering him £150 to pass the examination in his (the student's) name.

— Professor Billroth has lately refused an invitation to succeed Professor Langenbeck in Berlin. The Vienna students thereupon resolved to thank him for determining to stay with them. In the morning of June 22d an address was presented to him in the hall of the Academy of Sciences, where most of the professors of the University and many men of science had assembled, while the body of the hall was filled with students in their academic costume. The address was signed by a large number of Billroth's pupils, the name of Duke Karl Theodor of Bavaria heading the list. Dr. Billroth, who was received with great applause, said he considered himself as belonging to Austria and the University of Vienna. In the evening a great torchlight serenade was held in his honor. Some thousands of students, with torches and colored lamps, marched with the old University flag and a band of music to the street where the professor lives. "Gaudeamus igitur" was sung by thousands before the professor's house, and afterwards a hymn, specially composed for the occasion. Dr. Billroth thanked the students, who, after more singing and cheering, dispersed.

NEW YORK.

— The State Board of Charities met at Saratoga on the 12th of July, and received several reports in regard to the recent investigation into the condition of the chronic insane in the county poor-houses, and the means taken to have all patients whose insanity is of a violent or dangerous character removed to the State asylums at Binghamton and Ovid, there now being ample room for all of that class in these institutions. The committee of the Board, in company with the State Commissioner in Lunacy, having made a thorough investigation into the killing of one insane patient by another in the Utica Asylum, the Board, after hearing and discussing the committee's report (which exonerated the officers of the asylum from any neglect in the case, but censured them for their failure to give full publicity to the occurrence), adopted a resolution to the effect that it is the duty of the boards of managers of such institutions to take measures to bring promptly before the public authenticated accounts of extraordinary events of this character, since it was believed that the welfare of the institutions would thereby be promoted, and the public confidence in them maintained. At this meeting the Board also authorized a representation in the National Conference of Charities to be held at Madison, Wis., August 11th.

— The National Association for Sanitary and Rural Improvement held a three days' convention at Greenwood Lake, New York, on the 7th, 8th, and 10th of July, and among those present at it were Prof. J. M. Watson, of the Elizabeth (N. J.) Board of Health, Dr. Elisha Harris and Hon. Erastus Brooks, of the New York State Board of Health, and Dr. E. M. Hunt, of the New Jersey State Board of Health. The convention was opened with an address by C. F. Wingate, of Brooklyn, secretary of the Association, on the need of sanitary associations, and in it was given a *résumé* of the history of such organizations in the United States and Great Britain, and the important results accomplished thereby. Among the other papers read at the first day's session were one on tree preservation by Franklin B. Hough, of Washington, chief of Forestry Section, Department of Agriculture, which advocated the planting of trees as a prevention of malaria and a security against drought, and one by Mrs. H. M. Plunkett, of Pittsburgh, giving the history of the first rural improvement society of Stockbridge, Mass. Addresses were also made by B. G. Northrop, secretary of the Connecticut Board of Education, on farmers' homes in relation to their adornment and sanitary surroundings; by William Rapp, of New York, in condemnation of wall-papers containing arsenic; and by Dr. J. H. Kidder, of Washington, on dust and the forms of disease resulting from its effects upon the human system. On the second day a number of papers on sewerage and the causes and remedies of malaria were read by Drs. Hunt, Elisha Harris, and others. On the third day the first business was the discussion of a paper from Frederick Law Olmstead, of New York, on the economy of park organizations and the necessity of tree-planting, by Dr. A. M. Bell, of New York, Prof. J. Madison Watson, of New Jersey, and the chairman, Hon. Erastus Brooks, of New York. Mr. Brooks said that he thought it would be a good plan for a tree to be planted at the birth of every child. As there were hundreds of thousands of children born each year throughout the country, in this way the wanton waste of trees which had been going on would be replaced. At the conclusion of the discussion Mr. W. O. McDowell offered a resolution that the Association recommend, that April 10th in each year be set apart as a day for tree-planting, which was unanimously adopted. In proposing it he said that he thought it would in time come to be as generally observed as Decoration Day. Mr. George C. Booth read a paper on tenement-house reform, in which he gave some details of the work of the New York Society for Improving the Condition of the Poor, with which he was connected. In the city of New York, he said, there were twenty-two thousand tenement-houses containing from four to forty families each, and eight thousand more containing from two to three families each. On the complaint of the Society landlords were compelled to put the premises in repair where there was defective plumbing, damp cellars, or other unsanitary conditions present, and thus much good had already been accomplished, although a vast amount of work still remained to be done in connection with the New York tenement-houses. Dr. Rawson, of South Orange, New Jersey, read a paper on the necessity for the teaching of sanitary science in the public schools, and Dr. Bell spoke at length upon the imperfect ventilation of the New York and Brooklyn schools, and the general ignorance on the part of the teachers of the most rudimentary elements of hygiene. On motion of Dr Alfred L. Carroll, of New Brighton, Staten Island, a resolution was passed to the effect that the Association regarded the proposed Congressional limitation of the means and functions of the National Board of Health as an ill-advised and retrograde measure, fraught with injury to the best interests of the people. The last paper read was one by ex-Governor Frank Fuller, of Utah, on unsanitary cooking, in the course of which he advocated the publication by the Association of a pamphlet giving directions for the proper preparation of the most common and simple articles of food, especially the various cereals. The committee on organization reported that the name of the Association should be The National Association of Sanitary and Rural Improvement, and that it should disseminate its principles by the formation of local organizations and the issuing of pamphlets and other publications. Among the officers elected were the following: President, Hon. Erastus Brooks; Vice-Presidents, Henry E. Pellew, Frederick Law Olmstead, Col. George E. Waring, Jr., Prof. Henry J. Morton, and Mrs. Isabella Beecher Hooker; Secretary, Charles F. Wingate, of Brooklyn.

— Since the 18th of July all vessels arriving at quarantine from Havana have been detained at the upper quarantine grounds, off Robbin's Reef, in order to be fumigated before coming up to the city.

— On the 9th ult. a negro woman died at Far Rockaway, Long Island, at the advanced age of one hundred and eight years. Up to near the time of her death her sight remained good, and she was quite active. On the 16th there died in Pearl Street, New York, from the infirmities incidental to extreme old age, a white woman reported to be one hundred and two years old. She was a native of Ireland, and came to the United States forty-three years ago.

Miscellany.

MEDICINE ONE HUNDRED YEARS AGO.

THE following letter gives an interesting glimpse at the practice of medicine one hundred years ago. Dr. William Hunter, the writer, was a Scotch physician settled in Newport, where he had an exceedingly lucrative practice. He delivered a series of anatomical lectures in Newport in 1754. In 1756 he was appointed surgeon to the Rhode Island regiment destined to act against the French in Canada. When the British occupied Rhode Island during the Revolution he gave strong evidence of attachment to his countrymen, and was appointed physician to their military hospital, "where he apparently caught a pestilential fever," which proved fatal in a few days.

These particulars are taken from a letter written by Dr. Benjamin Waterhouse, of Boston, to Dr. Caspar Wistar, of Philadelphia, in 1808.

The letter of Dr. Hunter was handed us by a descendant of the gentleman to whom it was addressed.

NEWPORT, *June 16th*, 1774.

DEAR SIR, — As you find the musk agrees better with your son than the Bolusses, I have sent you six doses more, one of which you may give him in the strong Valerian Tea every six hours, as formerly.

The musk will now have a better effect upon him than if he had been taking it all this time, a short interval from the use of it will make it more powerfull, and the good affects of it will soon be more evident. I have also sent you nine more of the Fœtid Bolusses, which you may give him, as formerly, in place of the musk. Lest you should be out of Valerian I have sent you more. You may let him drink plentifully of this strong Valerian Tea for his Common drink with wine in it always. I cannot think he will require any more Blistering, especially as his pulse is become more full. No symptom so favorable as when the momentum of his pulse becomes greater as the Velocity becomes less, and this symptom, I think, you observe. By the time he has taken the powders and bolusses now sent, I am sure he will be able to make use of the Bark in some form. If he cannot take it in powder, which I would prefer to every other way of giving it, you must let him take it in strong Decoction with wine added to it. An ounce of the bark boiled in three gills of water into a gill and a half, then strain it, and add to it one third part more of good Madeira wine, two tablespoonfulls of which you may give him every two hours except when a sleep. If the powder or decoction should be thought too strong for him at first, you may give him the Cold infusion of bark, which is found to be one of the most safe and effectual preparations to people very much reduced by sickness. Take an ounce of the very fine powdered bark, add to it half a pint of very good Spring or rain water, and as he uses it strain it, observing to give him two Tablespoonfulls of it every two hours. Nothing will recover his Strength and senses so fast as bark and a free use of good wine. The account you give of your son when he first awakes is common to all much reduced or exhausted with a fever such as his has been. That crying out when he first awakes is a sure symptom that he is yet in a degree of Idiotism, or that his Brain is not entirely freed. Be not uneasy about his senses, they will recover altho' it will be very slow, but they will return in proportion to his bodyly strength, which will also be very slow, with the greatest care. The Bunches, like as if he had been stroked with Nettles, will be salutary if they are not brought on by keeping him too hot with bed Cloths, which I think has not been the case, as I early observed to you that keeping him too warm would be hurtful to him. I am, Dear Sir, yours sincerely, WM. HUNTER.

THE THERMOMETRIC BUREAU OF THE YALE COLLEGE OBSERVATORY.

ACCORDING to the annual report of the astronomer in charge of the Thermometric Bureau, there had been 3811 physicians' thermometers examined as compared with 1667 during the preceding year. The following extract contains the greater portion of his report in regard to clinical thermometers: —

"The improvement in the manufacture of clinical thermometers in this country continues, and the thermometers we receive which are most misleading in their indications are those which come in from private practice, and which have been in use for a year or more.

"We have been much encouraged in this department of the observatory work by the cordial indorsement given to it by the medical press. There have been some suggestions made by gentlemen eminent in the medical profession, both privately and in print, concerning some new facts we should give in the certificates accompanying thermometers sent from here. The most important is contained in Dr. E. R. Squibb's interesting paper on clinical thermometers, read at the New York State Medical Association's meeting at Albany, and refers to the testing of thermometers for sensitiveness. He notes the difference in time required for different thermometers to attain their maximum reading, owing to the varying thickness and shape of the glass in the bulb, and suggests some test be applied which shall give the observer the time required for each instrument to reach its maximum. We have considered this matter, but so far have not devised a simple test which sufficiently approximates the conditions met with in medical practice to be of service in this connection.

"About four hundred ungraduated thermometer tubes have been sent to the observatory to be sealed in boxes for proper ageing. With these thermometers, as they are subsequently issued, a special certificate is given, stating the age of the thermometers when examined. The Kew Observatory has followed our example in this matter, and now receives thermometers for sealing in a similar manner.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 15, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Whooping-Cough.
New York	1,206,590	1084	690	46.40	9.68	35.59	3.27	1.65
Philadelphia	846,984	421	189	9.26	2.14	—	4.27	.21
Brooklyn	566,689	452	320	53.48	5.30	42.65	2.87	2.21
Chicago	503,304	224	113	78.10	7.58	21.06	4.01	1.73
Boston	362,535	156	57	23.72	5.77	14.10	2.56	1.23
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	206	118	37.35	1.94	26.68	1.94	.49
Cincinnati	255,708	165	87	29.09	6.66	4.85	1.82	.61
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	123	69	40.65	3.25	35.77	—	—
Pittsburgh	156,381	100	58	44.00	5.00	32.00	1.00	.30
Buffalo	155,137	62	30	30 62	6.45	9.67	3.22	—
Milwaukee	115,578	30	19	20.00	13.33	6.66	—	3.33
Providence	104,857	32	14	28.13	12.50	12.50	9.37	6.25
New Haven	62,882	26	7	19.23	7.69	3.84	3.84	—
Charleston	49,999	46	27	36.95	2.17	6.51	2.17	21.74
Nashville	43,461	17	6	23.52	—	17.64	—	—
Lowell	59,485	33	12	12.12	6.06	12.12	—	—
Worcester	58,295	23	11	26.08	4.35	21.75	4.35	—
Cambridge	52,740	12	6	8.33	16.66	—	8 33	—
Fall River	49,006	25	16	16.00	4.00	8.00	—	—
Lawrence	39,178	18	8	16.66	5.55	11.11	—	—
Lynn	38,284	13	3	—	—	—	—	—
Springfield	33,340	8	4	25.00	—	25.00	—	—
Salem	27,598	12	3	—	—	—	—	—
New Bedford	26,875	12	2	8.33	—	—	—	—
Somerville	24,985	14	4	7.14	7.14	—	7.14	—
Holyoke	21,851	14	12	42.84	—	42.84	—	—
Chelsea	21,785	6	4	—	—	—	—	—
Taunton	21,213	6	1	—	—	—	—	—
Gloucester	19,329	6	2	50.00	—	—	20.00	—
Haverhill	18,475	9	0	11.11	—	11.11	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	1	1	—	—	—	—	—
Newburyport	13,537	4	4	—	25.00	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	5	0	60.00	—	40 00	20.00	—
Nineteen Massachusetts towns	140,252	44	5	14.89	—	4.05	—	2.93

Deaths reported 3409 (no reports from St. Louis and New Orleans): 1899 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1205, consumption 348, lung diseases 179, diarrhœal diseases 824, diphtheria and croup 100, whooping-cough 54, measles 46, scarlet fever 43, typhoid fever 39, small-pox 31, cerebro-spinal meningitis 22, malarial fevers 22, puerperal fever 13, erysipelas 10, typhus fever one. From *measles*, New York 24, Brooklyn eight, Baltimore and Pittsburgh four each, Cincinnati and Buffalo two each, Philadelphia and Boston one each. From *scarlet fever*, New York 12, Brooklyn 11, Philadelphia seven, Cincinnati and Buffalo four each, New Haven two, Boston, District of Columbia, and Waltham one each. From *typhoid fever*, Philadelphia and Chicago nine each, New York and Cincinnati five each, Boston, District of Columbia, and Charleston two each, Baltimore, Pittsburgh, Buffalo, Gloucester, and Quincy one each. From *small-pox*, Cincinnati 22, Chicago three, New York and Baltimore two each, Philadelphia and Pittsburgh one each. From *cerebro-spinal meningitis*, New York and Baltimore six each, Buffalo and Milwaukee two each, Philadelphia, Chicago, Boston, Cincinnati, Fall River, and Lawrence one each. From *malarial fevers*, New York seven, Brooklyn five, Baltimore four, District of Columbia three, Buffalo, New Haven, and Nashville one each. From *puerperal fever*, Boston and Pittsburgh two each, New York, Philadelphia, Brooklyn, Chicago, Milwaukee, Charleston, New Bedford, Northampton, and Waltham one each. From *erysipelas*, New York three, Boston and Cincinnati two each, Brooklyn, Buffalo, and Fall River one each. From *typhus fever*, New York one.

Sixty-one cases of small-pox were reported in Cincinnati, Baltimore 15, Brooklyn six, Buffalo four; diphtheria 13, scarlet fever six, typhoid fever three, in Boston; scarlet fever five, and diphtheria one, in Milwaukee.

In 38 cities and towns of Massachusetts, with a population of 1,054,387 (population of the State 1,783,086), the total death-rate for the week was 19.87 against 16.61 and 16.95 for the previous two weeks.

For the week ending June 24th, in 173 German cities and towns, with an estimated population of 8,426,161, the death-rate was 26.4. Deaths reported 4286: under five 2265; pulmonary consumption 555, acute diseases of the respiratory organs 440, diarrhœal diseases 273, diphtheria and croup 178, scarlet fever 85, measles and rötheln 54, typhoid fever 31, puerperal fever 20, typhus fever (Danzig and Posen each one) two. The death-rates ranged from 14.9 in Münster to 40.2 in Posen; Königsberg 31.2; Breslau 33.7; Munich 35.7; Dresden 25.2; Berlin 29.0; Leipzig 17.3; Hamburg 23.1; Cologne 28.7; Frankfort a. M. 20.4; Strasburg 35.1.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending July 1st, the death-rate was 18.1. Deaths reported 2936: acute diseases of the respiratory organs (London) 212, whooping-cough 135, diarrhœa 96, measles 87, scarlet fever 74, fever 46, diphtheria 17, small-pox nine. The death-rates ranged from 9.5 in Wolverhampton to 25.1 in Preston; Sunderland 13.1; Leeds 15.4; Birmingham 16; London 17.5; Sheffield 18; Derby 19.4; Hull 20.7; Liverpool 22.3. In Edinburgh 19.5; Glasgow 23; Dublin 20.7.

For the week ending July 1st, in the Swiss towns, population 494,390, there were 34 deaths from consumption, acute diseases of the respiratory organs 17, diarrhœal diseases 17, heart disease 12, diphtheria and croup 10, scarlet fever seven, typhoid fever five. The death-rates were, at Geneva 11.4; Zurich 16.2; Basle 16.3; Berne 27.6.

The meteorological record for the week ending July 15th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1882.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 9	29.970	76	87	65	87	51	71	70	SW	W	W	6	12	3	O	F	C	—	—
Mon., 10	29.883	80	92	69	70	41	71	61	Calm	W	SW	0	12	10	F	F	C	—	—
Tues., 11	29.756	82	93	72	71	50	76	66	SW	SW	SW	7	17	6	F	F	C	—	—
Wed., 12	29.888	78	91	69	58	24	61	48	W	SW	SW	4	10	6	C	C	C	—	—
Thurs., 13	29.806	75	87	65	94	46	66	69	S	W	W	11	17	4	R	F	C	—	—
Fri., 14	30.017	75	89	64	76	33	71	60	W	SW	SW	4	6	7	F	F	C	—	—
Sat., 15	30.208	68	78	66	72	57	73	67	N	E	SW	5	8	6	O	C	C	—	—
Means, the week.	29.933	76	93	64				63										3.30	.37

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 15, 1882, TO JULY 21, 1882.

Brooke, John, captain and assistant surgeon. Having reported at these headquarters, is assigned to duty as post surgeon at Angel Island, Cal. S. O. 120, Military Division of the Pacific and Department of California, July 7, 1882.

Corson, J. K., captain and assistant surgeon. Relieved from from duty in Department of Arizona, to proceed to Philadelphia, Pa., and, on arrival, report by letter to the Surgeon-General. S. O. 164, A. G. O., July 17, 1882.

Carvallo, C., captain and assistant surgeon. Relieved from further duty in Department of the Platte, and to report by letter at the expiration of his present sick leave of absence to the Surgeon-General. S. O. 164, C. S., A. G. O.

Hopkins, William E., first lieutenant and assistant surgeon (recently appointed). To report by letter to the commanding general, Department of the East, for assignment to temporary duty. S. O. 164, C. S., A. G. O.

Barrows, Charles C., first lieutenant and assistant surgeon (recently appointed). To report in person to commanding general, Department of Arizona, for assignment to duty. S. O. 164, C. S., A. G. O.

Munday, Benjamin, first lieutenant and assistant surgeon (recently appointed). Assigned to temporary duty at Willet's Point, N. Y. S. O. 164, C. S., A. G. O.

Wilson, George F., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of the Columbia, for assignment to duty. S. O. 164, C. S., A. G. O.

Owen, William O., Jr., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of the Columbia, for assignment to duty. S. O. 164, C. S., A. G. O.

Egan, Peter R., first lieutenant and assistant surgeon (recently appointed). Assigned to temporary duty at the recruiting depot, David's Island, N. Y. S. O. 164, C. S., A. G. O.

Wakeman, William J., first lieutenant and assistant surgeon (recently appointed). Assigned to temporary duty at Columbus Barracks, Ohio. S. O. 164, C. S., A. G. O.

Everts, Edward, first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of the Columbia, October 1, 1882, for assignment to duty. S. O. 164, C. S., A. G. O.

Middlesex North District Medical Society. — The quarterly meeting of the Middlesex North District Medical Society will be held at the American House, Central Street, Lowell, Mass., on Wednesday, July 26, 1882, at four o'clock, P. M. Business: a paper by Dr. J. C. Irish, on Surgical Dressings; a paper by Dr. W. B. Jackson, on A Precocious Syphilide. Alternates, Drs. H. P. Jefferson and Gilman Kimball. Collation at close of business. Meeting of censors at three P. M., same day, at same place. George C. Osgood, *Secretary.*

Books and Pamphlets Received. — The Asylum Superintendents on the Needs of the Insane, with Statistics of Insanity in the United States. By C. L. Dana, A. M., M. D., Professor of Physiology in the Women's Medical College of New York, Physician to the Class of Nervous Diseases, Northeastern Dispensary. (Reprint.)

Twenty-Fourth Annual Announcement of the Chicago Medical College.

Excerpts from Opinions of Distinguished Medical Men in this and other Countries justifying the Treatment of the late President Garfield, together with a Letter in reply to the Resolution of the Special Committee of the House of Representatives referring to the Expenses consequent upon his Illness and Death. Washington, D. C.: Gibson Brothers, Printers.

A New Nervous Connection between Intra-Cranial Disease and Choked Disc. By Edward G. Loring, M. D. (Reprint.)

Annual Address delivered before the Medical Society of the State of California. By Gerrard George Tyrrell, Member of the King and Queen's College of Physicians, etc. Sacramento, Cal.

On Genital Renovation by Kolpostenotomy and Kolpoecpetasis in Urinary and Fecal Fistules. By Nathan Bozeman, M. D., New York. (Reprint from Vol. VI. Gynæcological Transactions.) 1882.

Treatment of Uterine Fibroids with Iodine. By S. J. Radcliffe, M. D. Washington, D. C. (Reprinted from the Philadelphia Medical Times.)

Pelvic Effusions and the Importance of their Early Recognition with reference to Treatment. By G. H. Lyman, M. D. (Reprint.)

Notes on Cases of Pelvic Effusion resulting in Abscess. By G. H. Lyman, M. D., Physician to Boston City Hospital. (Reprint.)

The Physiology and Pathology of the Blood; comprising the Origin, Mode of Development, Pathological and Post-Mortem Changes of its Morphological Elements in Mammalian and Oviparous Vertebrates. By Richard Norris, M. D., F. R. S. E., Professor of Physiology, Queen's College, Birmingham. With Micro-Photographic Illustrations. London: Smith, Elder & Co. 1882.

Fourth Annual Report of the State Board of Health of the State of Rhode Island for the Year ending December 31, 1881.

La Lithotritie doit être faite sans traumatisme, par le Dr. Reliquet, Lauréat de l'Institut. (Extrait de la Gazette des Hôpitaux.)

L'Année médicale (Quatrième année) 1881. Résumé des progrès réalisés dans les Sciences médicales, publié sons la direction du Dr. Bourneville, Médecine de l'hospice de Bicêtre, Rédacteur en chef du Progrès médical. Paris: E. Plon et Cie. 1882.

The Human Brain. Histological and Coarse Methods of Research. A Manual for Students and Asylum Medical Officers. By W. Bevan Lewis, L. R. C. P. (Lond.), Deputy Superintendent to the West Riding Lunatic Asylum. London: J. & A. Churchill. 1882.

Contributions to Practical Gynæcology. Illustrated with Sixteen Wood Engravings. By S. James Donaldson, M. D. Part I. Practical Observations upon Uterine Deflexions. Part II. Practical Observations upon Dysmenorrhœa. Read before the New York Medico-Chirurgical Society. New York: Trow's Printing and Bookbinding Company. 1882.

Original Articles.

THE SANITARY ASPECT OF NAHANT, MASS.

BY ERNEST W. BOWDITCH, ESQ.,
Sanitary Engineer.

Nahant proper, a peninsula of somewhat less than four hundred acres in area, during the season just passed, witnessed an outbreak of typhoid fever unusually severe in character (all things considered), and for the time, at least, threatening to injure the reputation of the place for healthfulness.

Probably no instance has occurred for years where an outbreak of a filth disease has appeared in a locality so singularly well situated for scientific study of cause and effect. The geographical position of the town is such that it seems hardly possible that outside territory could have the slightest direct effect upon the peninsula, and the character and intelligence of a majority of the citizens and visitors preclude the possibility of the intentional omission of any sanitary care that could be considered necessary, either on individual estates or in the town as a whole; and yet here in the midst of wealth and intelligence some of the grossest instances of carelessness, as regards the simplest sanitary matters, that can be conceived of, have come to light.

It is assumed that physicians and sanitarians agree in considering typhoid fever preëminently a filth disease, and, irrespective of individual premises where typhoid has appeared, the attention of a sanitary engineer is naturally called particularly to (1) drinking-water, milk, and ice; (2) drainage and general surroundings; (3) plumbing and ventilation, as being, possibly, those things that would be most apt to create trouble.

Impure drinking-water and ice from foul water may perhaps be the swiftest disseminators of an evil of this description, and though the writer does not for an instant assert as his belief that either impure water, ice, milk, defective drainage, filthy surroundings, or bad plumbing have individually or collectively been the *cause* of the typhoid at Nahant, yet it does appear as though the poor condition of the drinking-water, coupled perhaps with the injudicious disposal of the fæces of the inhabitants, and especially of the first typhoid patients, caused exceeding filthiness of the soil and predisposed people to typhoid, or rendered them more susceptible to its effects. Defective drains and plumbing may have had something to do with it, though there is lack of evidence on this point. The extraordinary character of the season probably had its influence. What does seem to be clear, however, not only here but elsewhere, is the imperative necessity of some system of periodical sanitary inspection of health resorts, the simpler the better, that will show the actual and comparative healthfulness of localities. Examination of a dozen or more summer resorts on the Atlantic seaboard, made by myself during the past year, show that inspection of any kind is rarely even attempted, and, further, that this entire lack of knowledge concerning the sanitary condition of resorts is the cause of much sickness, largely of a preventable kind, creating, occasionally, wide-spread troubles that for a time seriously injure the value of localities as sanitaria.

So far as my limited knowledge extends, no definite programme has yet been formulated for periodical inspection that appears to be suitable for universal adoption, though from the efforts now being made in this direction it is hoped this much-to-be-desired end may be reached.

A thorough chemical examination of drinking-waters naturally consumes much time, as also does inspection of premises. One chemist should analyze all waters of any certain locality, that any criticism made upon the results obtained may be given from one standpoint; for similar reasons one engineer or inspector should examine the premises.

Of the wells and cisterns on Nahant that were habitually or occasionally used during the past season as drinking waters, one hundred and ninety have been analyzed by Drs. Edward S. Wood, of Boston, and Charles Smart, of Washington, with the results classified as

Excellent	8
Good	37
Fair	18
Permissible	16
	79
Suspicious	58
Very suspicious or bad	53
	111

which may be classed as

Desirable waters, 79, or 41½ %.
Undesirable waters, 111, or 58½ %.

The actual number of analyses exceeds this by thirteen, but they are omitted, being only repetitions after a cleansing process. In this subdivision I have, except in seven instances, adopted the conclusions arrived at by Drs. Wood and Smart, who were unaware of the sources of the waters, save as Nahant Nos. 1, 2, 3, etc. The changes in the seven instances referred to were made after obtaining intimate knowledge of the surroundings.

I have here a plan showing the outline of Nahant (see Fig. 1), with black circles representing every case of typhoid fever known to have existed there last season. Doubtless there were others, but this completes the list, so far as I have been able to verify it with the means at my disposal. Forty households are represented (twenty per cent. of the total number of houses).

Certain of these cases, I have been informed by physicians, were "imported" from other towns. Certain other instances occur where the drinking-water is quite undesirable or bad; still others where the surroundings seem particularly favorable for the propagation of zymotic diseases; in fact, there is but one case out of nearly eighty that cannot be accounted for by filthy surroundings, bad drinking-water, or importation.

The second plan shows all the cases of fever, but those in full black only where the water was good or fair, those having supplies of impure water being in skeleton.

The third plan shows the same after removing the black centres from those cases that were "imported," or where the surroundings were bad.

There has been tabulated, for more convenient detail study, the results of chemical analyses of what are believed to have been the drinking-waters used at each and every one of the houses within town limits of Nahant where typhoid fever was known to exist last year. The general results of this study will be found incorporated in this paper.

---

[1] Read before the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, May 27, 1882.

Ten of the total of forty are cistern waters; the balance are from wells. The first sample was taken October 24, 1881, after most of the summer residents had left for the season, and the last was taken on March 30, 1882, six months after the summer residents had left, and at a season of the year when wells and cisterns should be purest; therefore many of these waters would have shown much greater impurity had they been tested during the summer.

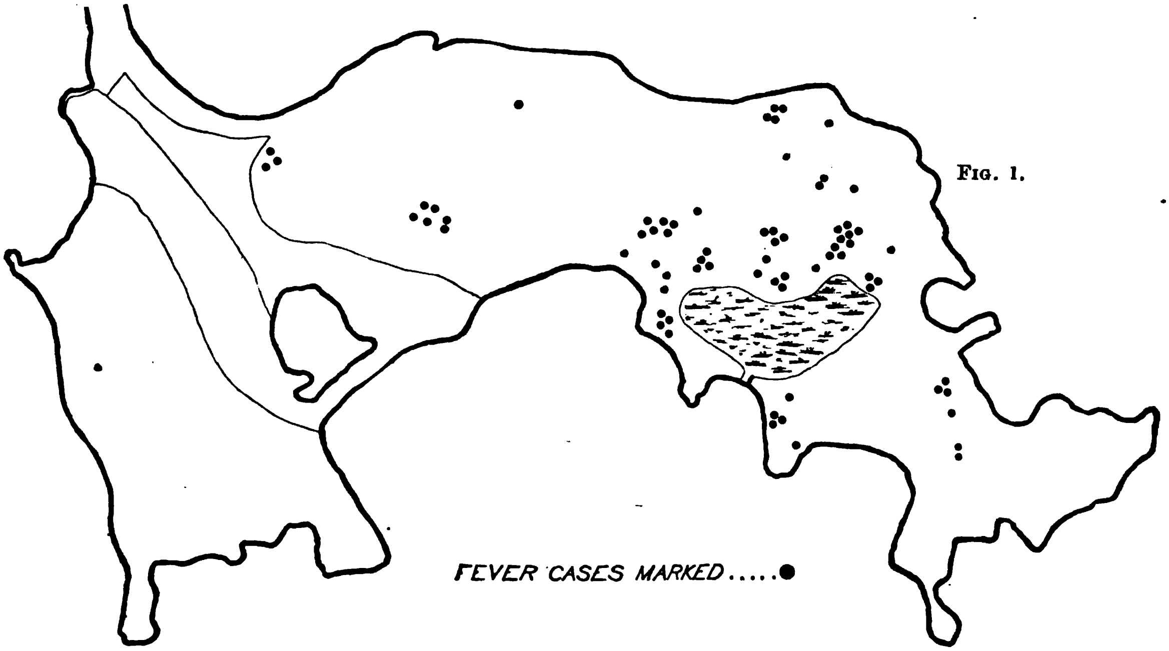


Fig. 1.

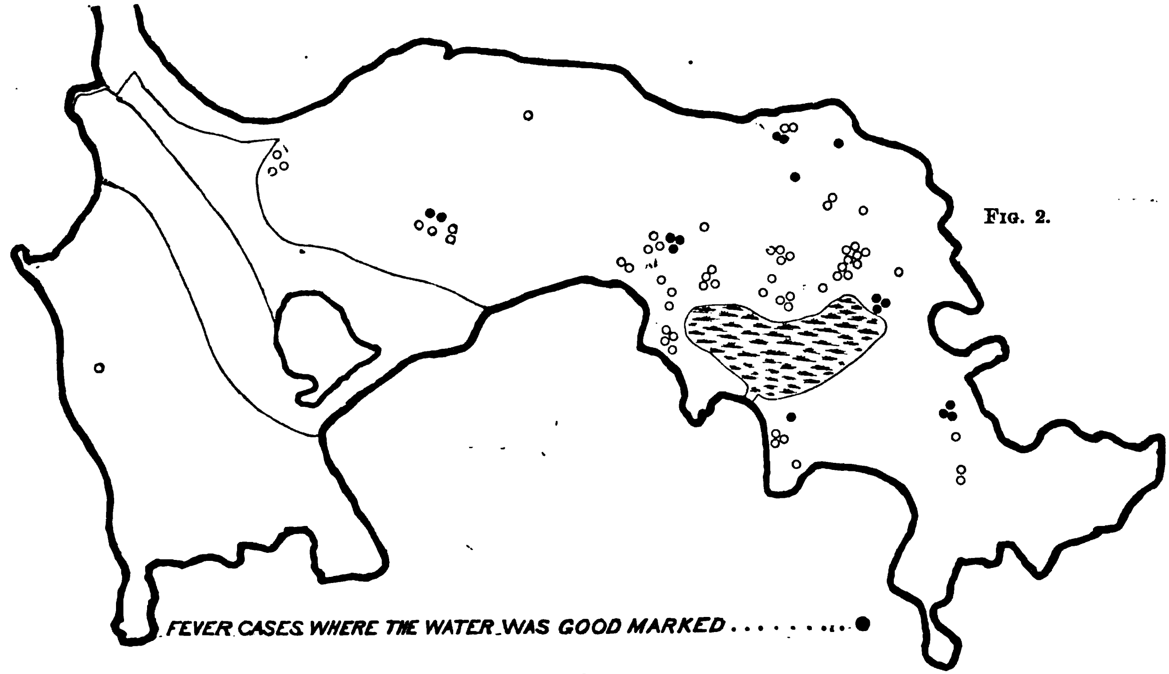


Fig. 2.

It would obviously have been better to have had the analysis made as soon as possible after the cases of fever took place, but at the time the examination began there were very scant data from which to work; there was no complete list of cases, and many were unknown to the local Board of Health. Moreover, the field of inquiry was largely a new one, to be approached with great care, not only for examination, but, so far as possible, for purification before the summer season of 1882.

Recourse was had to circulars, which were sent to every householder,—with rather meagre results. Fifteen families only reported typhoid fever. By dint of constant inquiry a list of forty has been made up, and though perhaps not absolutely accurate is the best I could obtain.

It is found that the total number of cases is about equally divided between the summer and permanent residents, though as a rule the drinking-waters were appreciably poorer among the permanent residents.

Of the wells and cisterns that are classed as "excellent," "good," or "fair" (nine in number, 22.5 per cent.), but two are at the houses of permanent residents, and both of these are easily explained. At one the only case of typhoid fever was an imported one; at the other the surroundings could scarcely be more unfortunate. For although the residence had a running spring in its well, whereby doubtless much filth would be likely to be carried off, yet with two overflowing leaching cesspools, one within ten, the other within fifteen, feet, it is easy to see how the well might be very badly contaminated without a moment's warning.

Forty houses represent about twenty per cent. of the total number in the town, and the number of cases of typhoid fever, believed to be between seventy and eighty, seems a very large proportion of the total summer population of 1500 (which the town boasts).

At ten of these forty houses cistern water was used for drinking purposes, of which eighty per cent. contained impure water, and it seems quite possible that had the other two been analyzed immediately after the first appearance of the disease, they, too, would have been of questionable purity.

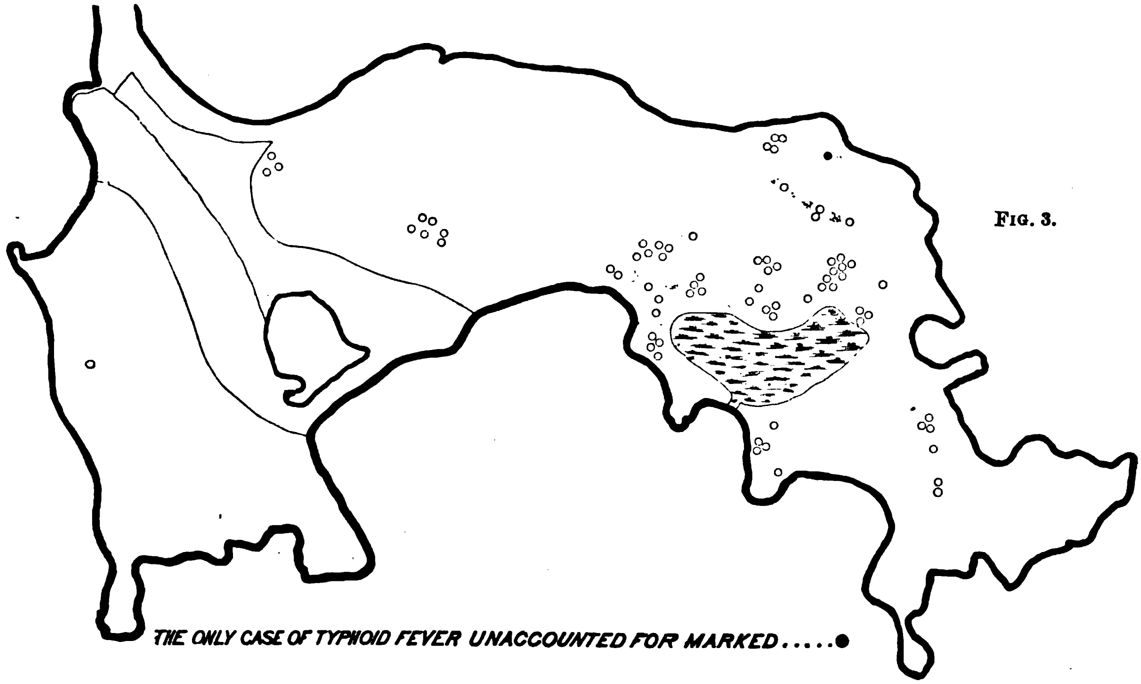


Fig. 3.

THE ONLY CASE OF TYPHOID FEVER UNACCOUNTED FOR MARKED.....●

The first case appeared in the family of a permanent resident, some time during June; well water was used exclusively for drinking. Analysis of it on November 10, 1881, showed the quality to be bad and the source of impurity to be still active. Inspection of the premises show a shallow well, sixteen feet deep, excavated through clay and ledge, and the lower five feet and bottom being ledge exclusively.

The immediate surroundings of the well at the present time are not particularly objectionable, but there seems ample room for supposing that the impurities enter on the top of, and through seams in, the ledge.

The second case appeared in a family of summer residents on August 2d, at eastern end of the town, where the soil is a light running gravel or coarse sand. The well water was used for drinking purposes, and there seems reason for believing the sources of contamination to have been four old cess-pools and a leaky drain on the same premises, none of which were known to exist or had been forgotten. One cesspool had been used every summer for thirteen years without ever having been cleaned out, and contained several feet of a black cheese-like material.

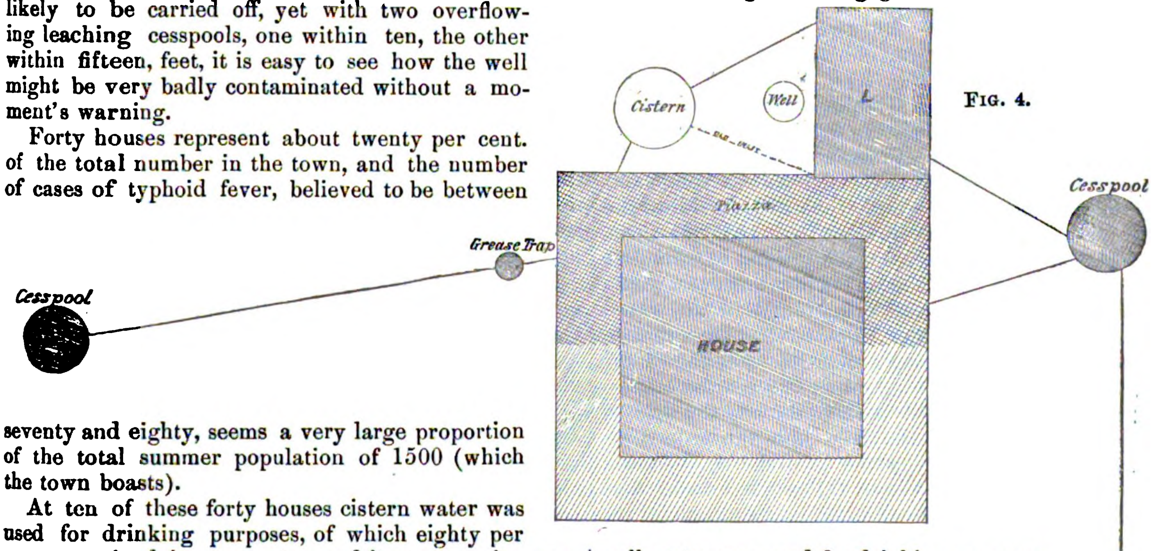


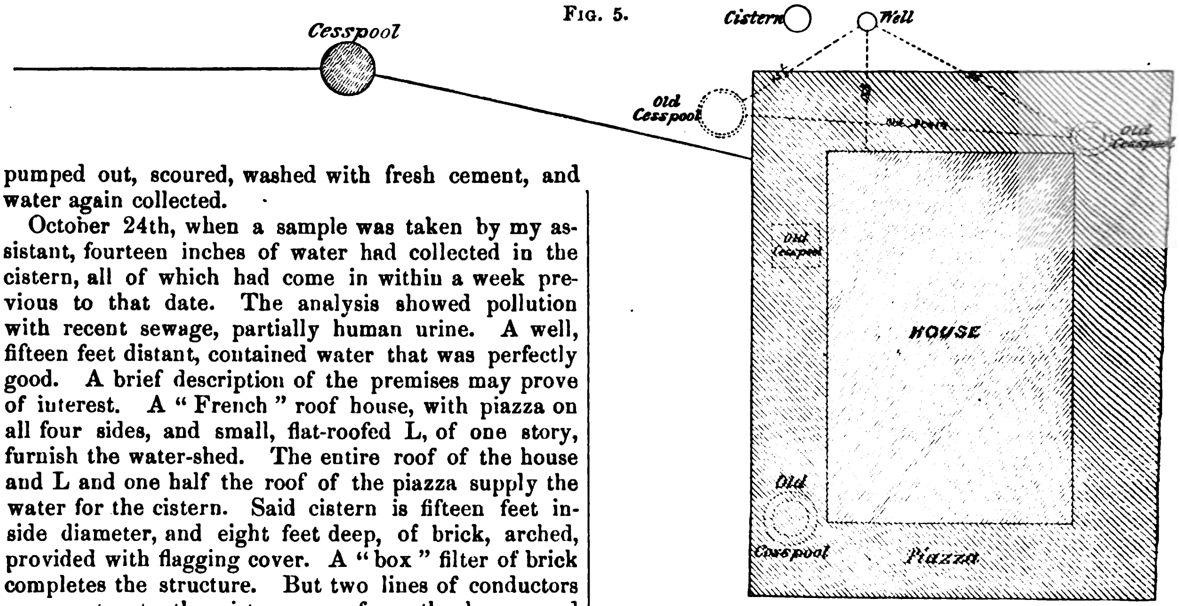
Fig. 4.

The third case appeared in a household of permanent residents living at the west end of the village, near Jacob's well. The well water is bad, and the surroundings poor. The fourth case is reported for August 5th, quite near No. 1.

The fifth case appeared August 5th, about midway between Nos. 1 and 2, in the family of old residents (living at the head of the meadow). The well water is pronounced good by Drs. Wood, Cabot, and Smart. The surroundings are poor.

The sixth case (in a family of summer residents) appeared August 10th. Cistern water was used. An analysis made by Dr. Wood soon after showed the water to be foul. A second analysis by Samuel Cabot, Jr., showed the same results. The cistern was then pumped out, scoured, washed with fresh cement, and water again collected.

FIG. 5.



October 24th, when a sample was taken by my assistant, fourteen inches of water had collected in the cistern, all of which had come in within a week previous to that date. The analysis showed pollution with recent sewage, partially human urine. A well, fifteen feet distant, contained water that was perfectly good. A brief description of the premises may prove of interest. A "French" roof house, with piazza on all four sides, and small, flat-roofed L, of one story, furnish the water-shed. The entire roof of the house and L and one half the roof of the piazza supply the water for the cistern. Said cistern is fifteen feet inside diameter, and eight feet deep, of brick, arched, provided with flagging cover. A "box" filter of brick completes the structure. But two lines of conductors carry water to the cistern, one from the house, and one from the L. (See Fig. 4.)

Close inspection showed three pipes entering the cistern, all inlets. (The cistern has no overflow of any description.) Detailed examination showed that the third pipe had formerly connected with a conductor, now discontinued, but the end of it still opened into the cistern, and had been the direct inlet for kitchen slops, etc., occasionally thrown upon the ground to stimulate vines growing on the piazza. This, however, would scarcely account for human urine found in the water. Contamination by chamber slops having been thrown on the piazza roof seeming a plausible solution of the problem, the following programme was carried out: —

After the family moved back to the city the disused pipe was removed, and the hole into the cistern securely plugged. To clean the roof the first shower was permitted to run to waste. The cistern was then simply pumped out, nothing more, and a sample of the next rainfall collected, and analyzed, with good results. These analyses were made by Dr. Charles Smart, of Washington, and the first is, I believe, the only record of a quantitative analysis of urine in drinking water that has ever been made. After the experiment was concluded a resident of the town testified to having seen chamber slops thrown from a window, and the owner acknowledged that the pail in which the slops were collected was rinsed and put on the roof of the piazza to air.

I have dwelt upon this case rather more in detail than I otherwise should for the simple reason that cistern water is usually supposed to be the purest water that can be obtained, and has been quite extensively used at Nahant and elsewhere by people who feared to use well water on account of soil contamination. It may not be out of place to state that with slight modifications the last-mentioned difficulty has by no means been confined to the house in question, but that in other cases rags, small wads of hair, known as combings, paper, etc., have been found in cisterns, which seems to prove that we cannot always be sure of the absolute purity of cistern water as it is usually collected.

The seventh case appeared in the house of a summer resident on August 10th, between Nos. 1 and 5. On this estate every well and cistern has been fouled with sewage. The surroundings are not good. On the portion of the meadow next adjoining this estate the condition of the soil is such that recently the workmen engaged in ditching have been made sick at the stomach, not one man, but every man in the gang of not over a dozen.

The eighth case (imported) appeared August 14th nearly at the southern end of this same meadow. Soil is gravelly. Water is excellent, and surroundings good.

From these the fever appears to have spread in all directions, as shown.

The ice used at Nahant is cut from Flax Pond, Lynn, a water supply that is considered by the inhabitants of Lynn to be unfit for use. It was intended to have an analysis made of the ice by Professor Pumpelly, but he has been unable to attend to it. A sample of the water, however, was taken from near the centre of the pond, immediately under the ice, on January 27, 1882.

I have been unable to obtain satisfactory lists of customers from the six milkmen who supply the townspeople in summer, but it is entirely safe to say that four of the six milkmen wash their cans with foul water, while neither of the other two have had water analyzed.

The detailed examinations are not yet completed, and though from lack of familiarity with individual estates it is scarcely possible to obtain all details on every place without slight errors and omissions, it is believed that sufficient has been obtained to render possible a reasonably clear *exposé* of the present condition of things on a majority of the estates, and point out the changes desirable.

REMEDIES PROPOSED.

Taking into account all the various known conditions it was decided: —

First. To advise a system of pipe sewers sufficient for the present use and future growth of the town.

Second. So far as possible to cleanse the wells and cisterns and put them in better condition than they were in the summer of 1881.

Third. To obtain a purer supply of ice.

Fourth. To be certain that the cans of milkmen are rinsed with pure water.

Fifth. As it is possible the typhoid germs (if there be such things) of last year may many of them remain in the ground and prove of great trouble this season, it is proposed that the Board of Health, of Nahant, deliver drinking water, known to be good, to every house at Nahant throughout the season, where they express a willingness to use it to the exclusion of other supplies, and, at least at those houses where typhoid existed last season, to insist on its use so far as possible.

The sewers are now practically finished. Wells and cisterns are being cleansed rapidly, and in many cases house plumbing is being largely rearranged and ventilated.

No definite steps have as yet been taken about obtaining a better supply of ice, nor has anything yet been done about the milkmen.

◆

THE PRESENCE OF THE MICROCOCCUS IN THE BLOOD OF MALIGNANT MEASLES; ITS IMPORTANCE IN TREATMENT.[1]

BY JOHN M. KEATING, M. D.,

Lecturer on Diseases of Children in the University of Pennsylvania, Visiting Obstetrician to the Philadelphia Hospital.

I PROPOSE to present for your consideration this evening the report of a recent epidemic in the Children's Asylum of the Philadelphia Hospital. The ward in which the disease first showed itself contained children between the ages of two and three years; some of them had been deserted by their mothers, and others had been placed there temporarily whilst the mothers were employed in duties about the establishment. For the most part, these children presented a fair appearance of health; they were seemingly well nourished, of good development, though probably they would have been classed as "strumous" if their large features and tendency to glandular enlargements and eczematous eruptions had received careful attention. Together with all children of this class living in asylums, they certainly presented an open field for the production of those complications that are usually such fatal attendants upon measles.

In order to save time, I shall in this paper simply narrate the history of the cases. The little patients were zealously cared for by Dr. H. E. Campbell, Resident Physician, to whom I am indebted for the record of the notes taken at each of my visits.

I shall also embody in this report the investigation undertaken by Dr. Henry F. Formad, now well known as the patient and thorough investigator of the microscopic appearance of the blood in diphtheria, associated with Dr. H. C. Wood, under the auspices of the National Board of Health. Dr. Formad examined almost daily the blood of each little patient, and together we noted the presence of micrococci in the malignant cases, and their absence in those of mild type; a record of these examinations was kept by Dr. W. A. Edwards, assistant pathologist, as also the records of the post-mortem examinations, and to him I am indebted for them. We entered this study with no pre-conceived views; the rapidity with which this exceedingly fatal epidemic came upon us necessitated careful study in order to attempt, if possible, to discover its cause. Photographs were presented, which showed the appearance of the field in these cases.

CASE I. J. F., aged two years and three months, was taken sick April 12, 1882. There had been no cases of well-defined measles in the house at that time, although it was epidemic in the city. The child had a sore throat, some cough, with fever. The throat eruption was punctated and well marked. The child died in convulsions April 15, 1882.

Autopsy. An ante-mortem (chicken-fat) clot was found in the right heart, extending into the pulmonary artery. There was great systemic venous engorgement. A decided staining was noticed upon the cadaver, especially about the temple, which caused the remark that the disease was probably one of the exanthemata. This child had been placed upon carbonate of ammonia, quinia, and digitalis; had had bromide of potassium, hot baths, and stimulants in small quantities.

CASE II. M. J., aged three years and five months, was taken sick April 9, 1882. A slight eruption on the face was noted April 11, 1882; the next day the eruption was complete over the entire body. In this case the eruption was irregular, was decidedly that of measles, but of malignant type. Still she did well until April 17, 1882, when suddenly the breathing became harsh, and pulse was rapid. At 4.30 P. M, had an attack of suffocation, with rapid, feeble pulse. There was general venous engorgement; the face and lips were purple; pulse growing more rapid. Hot baths, with mustard and frictions, were used, and carbonate of ammonia and digitalis given. It was suggested to bleed in this case, but the evidences of heart clot were so marked, and the child had exhibited so many evidences of malignancy at the onset, that baths were used instead. April 11, 1882, at three A. M., she was still growing worse despite treatment, and shortly after had a violent convulsion and died.

There was no autopsy permitted.

CASE III. A. G., aged sixteen months. Took sick April 15, 1882. April 16th had prodromes of measles. The temperature and pulse ran as follows: April 16th, P. M. 102° F. 17th, A. M. 101° F.; P. M. 103° F.; pulse 180. 18th, A. M. 102° F.; P. M. 103° F.; pulse 180. 19th, A. M. 101° F.; P. M. 102° F.; pulse 160. 20th, A. M. 101° F.; P. M. 102° F.; pulse 148. 21st, A. M. 100° F.; P. M. 100° F.; pulse 180.

In this case no defined eruption appeared on the body, although there was a decided papular eruption on the uvula and anterior half arches of the throat. Whilst showing this case to the class we noted streaks of grayish membrane in the fauces. The child had decided bronchitis, and the voice showed that the laryngeal mucous membrane was also affected. This child was not at that time very ill. There was no question in our minds at the time that it was affected severely by the measles poison, that it was, in fact, another malignant case. It was carefully watched, the nourishment regularly given, with quinia and iron daily, as was customary in all the cases.

---

[1] Read before the College of Physicians, Philadelphia, June 7, 1882.

On the 21st the breathing was noted as peculiar (I shall describe it hereafter). An emetic was ordered of ipecac, fearing an accumulation of mucus from the bronchitis present, and also carbonate of ammonia and digitalis and hot foot-baths were given. The child's intelligence seemed good, and it will be noted that the temperature was but 100° F., while the pulse was 180.

At eight P. M. a second attack of suffocation occurred, and the child died in violent convulsions. The venous engorgement was very marked. *Autopsy.* A. G., baby, aged one year. Post-mortem examination held ten hours after death. *Heart.* Left side and valves all normal. *Right side.* A large ante-mortem clot filling the cavity of the right ventricle, and extending into the auricle; a clot was also seen in the pulmonary artery. *Lungs.* Left, normal. *Right lung.* At the base of this lung the lesions of pulmonary congestion were seen, especially where the lung approximates the diaphragm. *Intestines.* Slightly congested and hyperæmic. *Mesenteric glands.* Enlarged and infiltrated by simple congestion. *Kidneys.* Normal. *Blood.* Taken from the heart cavity as soon as it was opened and examined showed micrococci in the liquor sanguinis and *in the white blood corpuscles.*

Case IV. J. F. McH., aged twenty-three months. This child had a typical attack of measles. The case was shown to my ward class several times throughout its course, the eruption was studied carefully in all of its details, and my friend, Dr. John M. Taylor, obtained for me an excellent representation of the measles eruption in water colors from this case. I refer especially to these points as evidence that the epidemic was one of measles, the cases heretofore were so irregular as to leave room for doubt to those hearing the recital of their histories. The eruption was rapidly disappearing, and desquamation had set in. April 21st the bronchitis seemed to be aggravated, the respirations were 36, and expirations seemed unusually prolonged. The breathing was noisy; the heart's action was rapid, pulse 148. Suddenly, in the evening, an attack of suffocation came on, which was relieved by an inhalation of nitrite of amyl. On the morning of April 22d the heart was beating 168; the venous engorgement was very marked, the jugular veins standing out like whip cords, the respirations were from 36 to 40, but the temperature was 99° F. I saw the child at this time, and noted the gasping breathing, the feeble pulse, and the tumultuous action of the heart. There seemed to be capillary spasm, judging from the gasping breath, the imploring look which the child gave to all its attendants, and we at once gave an inhalation of nitrite of amyl. In a few moments it seemed relieved. The administration of carbonate of ammonia, digitalis, hot baths, etc., was rigidly adhered to. The child seemed comfortable until 4.30 P. M., when it had another attack of milder character, though longer duration, and in it finally died of convulsions. It was observed, says Dr. Campbell in his notes, that the convulsion was not as severe as in the previous cases.

Autopsy. J. F. McH., post mortem made twenty hours after death. Eruption not well marked. *Heart.* Right ventricle contained a small ante-mortem clot. This clot was in the cavity of the ventricle, and did not involve the valves, either tricuspid or pulmonary. The left side of the heart was normal in every respect; contained no clot. *Lungs.* Normal, with the exception of hypostatic congestion at both bases. The pulmonary and costal pleura of the left side were inflamed and adherent in some places. *Trachea.* Inflamed, and containing a tenacious mucous secretion. *Larynx.* Inflamed and hyperæmic. *Liver.* Normal. *Intestines.* Peyer's patches and the solitary and agminated glands infiltrated and hyperæmic. *Mesenteric glands.* Enlarged and infiltrated, they were about the size of a grain of corn. *Kidneys.* Normal. *Spleen.* Amyloid bodies enlarged until they presented almost the appearance seen in a tubercular spleen. *Blood.* Taken from heart as soon as punctured. Micrococci were found in the liquor sanguinis and *in the white blood corpuscles, and they were mobile. In the corpuscles they were seen in great numbers in active movement of a vibratory or whirling character, and they appeared to have devoured the white cells.* No bacilliæ were seen.

Case V. J. McG., aged twenty-six months. Ordinary case of measles. The eruption had disappeared on or before April 15th.

April 22d. Child restless; marked bronchitis; cough paroxysmal upon waking, especially after excitement; mucous râles coarse, and fine throughout lungs posteriorly; throat congested, and saliva at times tinged with blood. At this date the breathing was noted as noisy. Pulse 144, respirations 32, temperature 100° F.

April 23d. Mucous râles becoming general, and not limited to areas as heretofore; pulse 152; respirations 34; temperature 101° F. In addition to the tonic and stimulating treatment, mustard poultices were applied to thorax and hot baths frequently given. Carbonate of ammonia was given now, two grains every hour, and bisulphate of quinia by suppository, two grains every three hours. In addition to this the child was given, as were all the others, milk and lime-water, beef tea, etc., at frequent intervals. We also used in this case the frequent administration of small doses of syr. ipecac to relieve the secretion, which was abundant and tenacious.

April 23d. Evening. Pulse was rapid, 160 to 170; temperature 102.5° F.; breathing becoming labored and gasping (fish like); venous stasis was becoming more marked. Increased the whiskey to about one ounce a day. The attacks of suffocation continued paroxysmally, the jugular veins stood out like cords at times. Nitrite of amyl gave immediate relief, but relapse soon followed; it was always followed by free emesis, which seemed to be in itself beneficial. About midnight a severe paroxysm came on, and with it a convulsion in which the child died. After death the venous engorgement was more marked, and heart-clot had been suspected for some time before. This little patient was the first case whose blood Dr. Formad examined during life. The view of the fluid was photographed; *micrococci were found in great abundance, acting especially on the white corpuscles.* The blood was examined very shortly before the child's death, when the symptoms of heart-clot had been fairly established, and the case declared hopeless. Unfortunately no autopsy was permitted in this case.

Case VI. F. M., aged two and a half years. This case ran a course as did the others, and I will only occupy time with a description of the post-mortem appearances.

Autopsy. F. M., aged two and a half years. Eruption well marked on mucous membrane of buccal cavity, not so on cutaneous surface.

Upon laying thorax open, lungs found to be anæmic, as far as arterial circulation was concerned, but dammed up with venous blood.

Heart. Normal in size and weight. *Right side* contained a clot extending along the pulmonary artery for some distance, it was chicken fat in consistence. *Left side.* Normal. *Spleen.* Congested; weight four ounces. *Intestines.* Along the small intestine could be seen a few Peyer's patches inflamed, and well outlined against the comparatively normal gut. The mesenteric glands presented a very good example of enlargement and infiltration; they looked like so many peas scattered throughout the mesentery. *Liver.* Normal. *Kidneys.* Normal. *Brain.* Not examined. *Blood.* Taken from heart cavity as soon as it was open showed micrococci in the liquor sanguinis and *in the white blood corpuscles, in abundance;* they were not mobile. A number of zoöglæa masses were seen.

Case VII. C. M., aged two and one half years. The eruption in the throat of this child was very well marked. A few crescentic points appeared in the temples, and the case rapidly developed malignant symptoms.

April 21st. Slight grayish, suspicious patches of membrane are seated in the throat. The child is hoarse, and there is much bronchitis.

April 22d. Pulse rapid; respiration 28; breathing irregular; there is great general venous stasis; the skin dark and mottled.

Dr. Formad examined the blood microscopically, and found it full of micrococci. He took a specimen sample for photography. Prognosis very unfavorable, as the child has fluttering heart and gasping breathing. Hot baths had been used freely with no success, so also salicylic acid, which had been suggested early in the disease.

After consultation with Dr. Formad, the account of which I incorporate in the summary, it was concluded to give at once two drachms of whiskey, and repeat it every hour; milk was continued as the only other food.

April 24th. Pulse 144; temperature 101° F.; respiration 48; circulation much improved; venous engorgement relieved; breathing greatly improved. The child continued to improve during the day. At the end of the twenty-four hours it had taken six ounces of whiskey, and yet it showed no effects of alcoholism. At noon the pulse was 140; respiration 36. Six p. m., pulse 132; respiration 32. Eleven p. m., pulse 132; respiration 26, and regular, breathing easy, though somewhat noisy, but not harsh. April 25th., a. m., temperature 98° F.; pulse 128; respiration 26. p. m., temperature 98° F.; pulse 108; respiration 24. April 26th, a. m., temperature 98° F.; pulse 96; respiration 22. p. m., temperature 98° F.; pulse 104; respiration 24.

The respirations remained regular, and the child continued to improve.

After the examination of the blood on April 30th, owing to the relative increase of the white corpuscles, it was decided to give Fowler's solution of arsenic, two drops, three times daily. The large doses of whiskey were kept up for three or four days, and gradually diminished.

I give Dr. Formad's reports, which he kindly wrote out for me: —

"Microscopic examination of the blood in the above case. (Examination made with a one-sixteenth immersion lens.)

"Examination April 22, 1882. Blood full of micrococci (sphero-bacteria), affecting many of the white blood corpuscles; also a large quantity of these fungi free and in various forms of grouping, mostly in zoöglæa masses. White blood corpuscles are in increased quantity; precipitation of fibrine excessively marked under the glass. April 24th. (Same case.) Micrococci present, but in diminished quantity; white blood corpuscles less affected; precipitation of fibrine less marked. April 26th (Same case.) Micrococci very marked, yet principally in zoöglæa masses, and free in serum, but not affecting the white corpuscles, although the latter are in increased quantity; fibrine not noticeable. April 30th. (Same case.) Micrococci present; white blood corpuscles still in excess, but not affected by micrococci; red blood corpuscles not readily forming rouleaux, having lost partly their bi-concavity. May 3d. (Same case.) Micrococci present in diminished quantity. White blood corpuscles diminishing in quantity. May 7th. (Same case.) Same as last. May 18th. (Same case.) Still some few micrococci present; blood otherwise appears normal."

Case VIII. J. W., aged eight months. May 13th, p. m. Eruption appeared on fifth day.

The temperature ran as follows: May 13th, p. m., 100$\frac{3}{5}$° F. May 14th, a. m., 101$\frac{2}{5}$° F.; p. m., 102$\frac{3}{5}$° F. May 15th, a. m., 101° F.; p. m., 103$\frac{2}{5}$° F. May 16th, a. m., 101$\frac{2}{5}$° F.; p. m., 104° F. May 17th, a. m., 101° F.; p. m., 102$\frac{3}{5}$° F. May 18th, a. m., 102° F.; p. m., 103$\frac{2}{5}$° F. May 19th. a. m., 100° F.; p. m., 103° F. May 20th, a. m, 103$\frac{2}{5}$° F.; p. m., 102° F. May 21st, a. m., 105° F.; death.

May 13th. A fever mixture was given during the day. Quiniæ et ferri citratis, two grains, every three hours.

May 18th. The eruption fading, but leaving a purple stain and mottled appearance of skin. Catarrhal pneumonia or collapse probably exists, as the bronchitis is very extensive, the râles numerous and subcrepitant. The blood examined under the microscope *shows micrococci in the blood corpuscles, but none free in the field. They are seen in great numbers.*

May 19th, p. m. For the past two hours the child has been very restless, the breathing rapid and labored, and also spasmodic; no membrane on tonsils or fauces; heart's action very rapid; venous stasis marked, especially in the jugular veins. Gave hot baths (says Dr. Campbell's notes), and covered him with blankets, with some relief. Increased the whiskey to two drachms every hour.

In the evening gave an emetic. The child at night was breathing easier; friction sounds heard.

May 20th. At times the strangulation would seem imminent. The venous engorgement increased, and the child died in convulsions on the morning of the 21st.

The post-mortem examination showed pneumonia and pleurisy with effusion.

The following eight cases were all taken sick at once, and I shall simply give a general statement of them for the purpose of especially calling attention to the case of W. L.

J. J., aged four years, W. L., aged five years, E. C., aged three years, catarrhal bronchitis; W. W., aged three years, C. B., aged two years, catarrhal bronchitis; J. W., aged five years, J. D., aged five years, L. K., aged five years.

Of these *eight* seven presented severe but nevertheless typical examples of measles, and their blood was carefully examined by Dr. Formad, and found normal. The case of W. L., who was taken ill at the same time as the others, showed from the onset a malignant tendency, giving a record such as I have already described. Dr. Formad gave me the following as the result of the examination of the blood in this case, and I had frequent occasion of examining it with him myself. Let me say that as soon as the presence of micrococci was established the child was placed upon two-drachm doses of whiskey every hour. Quiniæ et ferri citratis in citric acid, two grains every three hours, friction to the extremities, and warm baths, with milk and beef tea. April 22d. A few micrococci seen in the field. April 26th. Again noted. April 30th. Micrococci still present, white corpuscles increased, and marked precipitation of fibrine. *None were noted as having penetrated the corpuscles*; those that were found were simply in the serum. This child recovered, though every indication gave a very unfavorable prognosis.

In presenting this detailed report I desire to call especial attention to the following points, namely, the microscopic examination of the blood and the constant association of micrococci with the general manifestations of malignancy (a condition already well known), and the gradual but positive amelioration of all bad symptoms by treatment, which was directed to the micrococci as the *fons et origo* of trouble (this, I believe, for the first time exhibited).

It will be noted that the post-mortem examinations of these cases showed more or less simple pulmonary congestion, and at times simple enlargement of the glands, but usually so circumscribed as to preclude the possibility of its being the immediate or even remote cause of death. Again, the mode of death was peculiar: the fatal signs came on suddenly and with frightful intensity, the gasping breathing, the frantic efforts to obtain air (or really to aerate the blood), the imploring look, with consciousness not impaired, seemingly unduly acute, until the final convulsion or gradual cyanosis brought the end. The turgid veins, the occasional venous engorgement, the feeble pulse, and the fluttering heart pointed unmistakably to but one cause, the gradually forming right-sided heart-clot; and the post-mortem appearance, as these notes show, gave us a large, tough, chicken-fat clot, obstructing the venous circulation, firmly planted in the right heart and its tributaries, which was too often exhibited to raise a question. One of the earliest symptoms of this impending danger was undue rapidity of respiration. The child seemed to be doing well, its eruption irregular, probably incomplete, or dark and mottled, and in blotches, when attention would be called to the great rapidity of respiration with a peculiar gasping inspiration, fish-like in character. The other fatal symptoms would follow rapidly, and within twelve hours the child, despite carbonate of ammonia, warm baths, digitalis, etc., would die of heart-clot. What caused this?

In a short paper which appeared in the *American Journal of Medical Sciences* for January, 1882, I gave the experience of a number of cases of diphtheria, scarlet fever, and measles, and then attributed the condition to an increase of fibrine due to the rapid tissue changes and the malignancy of the type of disease, and urged the importance of pushing an alkaline treatment from the start.

The microscope has shown here that something more is associated with this condition.

The moment that symptoms of malignancy appeared, namely, dark eruptions, illy-defined crescents, delayed and imperfect appearance of the eruption, with feeble circulation, high temperature, and pharyngeal false membrane, the examination of the blood showed micrococci in abundance in the field. They do not simply lie as impediments to the free passage of blood, though they most undoubtedly do this, and obstruct its passage in capillaries, but they surround the corpuscles, they enter the white corpuscles and there develop with surprising rapidity, and finally cause some of them to rupture, and their contents will cover the field. Still, if they alone clogged the circulation in the capillaries, caused stasis in the lung, and thereby provoked an accumulation in the already enfeebled right heart, with blood having a tendency to coagulate, the cause of heart-clot alone would seem explained.

We find that they develop with activity when the blood current is retarded, hence we find them spread throughout the heart-clot itself, possibly at times having been here arrested by the obstruction to the flow caused by the lung congestion, known as a frequent complication of these cases, and finally aiding, by a mechanical cause alone, the deposition of fibrine that forms the clot. They do more. They act upon the white blood corpuscle, destroy it in all probability, or, at least, as one of the cases proves conclusively, prevents its change to red corpuscles, and thus the oxygen carriers being either destroyed or reduced in numbers with none to replace them, the tissues retain their detritus for want of carriers to relieve them, and another factor is added to increase mortality.

Granted, then, that the appearance of micrococci is coincident with symptoms of malignancy, we must assert that, whether their association be *post hoc* or *propter hoc*, they must have common cause; our treatment receives an impetus in a new direction.

I asked Dr. Formad what, in his experience, most readily checked the development of *micrococci* in his culture solutions obtained from erysipelas, diphtheria, etc.; he answered alcohol. Dr. Campbell at once withdrew carbonate of ammonia and digitalis from the treatment for the future, and gave whiskey. Five children had already died with the symptoms I have just described, and the sixth was exhibiting all the malignant symptoms, together with those which experience had taught us came from commencing heart-clot. The child had rapid gasping breathing, was becoming cyanosed, its heart was tumultuous, and the rapid pulse was growing weaker. The instructions were to give *three ounces of whiskey within the next twelve hours*, in frequent and small doses. The treatment was carefully carried out, and the child was saved. In this child micrococci were found in abundance in the blood, but none had penetrated the corpuscles, and for a long time the preponderance of white blood corpuscles was noted, which continued until gradually the blood became normal under the use of arsenic.

Again, let me illustrate another point. In one ward there were six cases at the height of eruption. I carefully examined, with Drs. Campbell and Markoe, each case. One case was found to be of a malignant type. The child's right cheek was hardened and inflamed, and the mucous membrane showed that glistening surface so manifest in cancrum oris. The breath was fetid, there were cerebral symptoms, and a grayish exudation lined the fauces. We wished to test the microscope, so, without reference to any particular case, we requested Dr. Formad to examine the blood of all. In five the blood showed no micrococci, in one a large mass appeared in the field upon the first examination, and this one was the malignant case. This child was placed at once upon large doses of whiskey, and it was also given, in tonic doses, quiniæ et ferri citratis and citric acid.

The vegetable acids have also this remarkable effect of checking the development of micrococci in culture solutions, especially acetic acid, but the mineral acids, also carbolic acid, it is said, have no such action.

The bichloride of mercury also possesses this quality to a very marked degree.

Now let me, for a moment, review this subject in the light of treatment, which to us is certainly of greatest importance. We may look at present upon the micrococcus as associated with the malignant symptoms of all complications known as "blood-poisoning." It is found in erysipelas, in puerperal septicæmia, in diphtheria, and in malignant measles. Experience has already taught us that alcohol, the vegetable acids, calomel, or corrosive sublimate, are the drugs *per se* in septicæmia.

The action of alcohol and calomel is too well authenticated in puerperal septicæmia to doubt their efficacy.

We know of late how surprising a result will often attend the use of alcohol and corrosive sublimate in malignant diphtheria, and also the value of vegetable acids, especially lemon-juice and claret, in this dreaded disease.

My cases simply illustrate one part of the subject. In this recital I do not allude to the other death-producing complications which are so universal. Children with measles will die of cerebral complications, of pneumonia, of enteritis, and entero-colitis — with these we have nothing to do at present. Their treatment will of course depend upon the lesions — quinine, opium, hot baths, poultices will all take part.

I have simply brought forward the subject of "blood-poisoning" for your consideration, and as these remarks are based upon the careful study of but one epidemic, they cannot be submitted as conclusive, but simply as illustrative of what may, at some future time, be accomplished by studying not merely the bacteria anatomically and physiologically, but by experimentation with bactericides as antidotal in their action in diseases they may cause or complicate.

The conclusions which seem warranted by the statements of this paper, and by observations made in other cases in the hospital, are as follows: —

The micrococcus is found in the contents of pustules and vesicles, and also in the blood taken from the measles papule in ordinarily mild cases, without its being present in the blood taken from the punctured finger. In severe cases, called malignant in this paper, owing to the rapid appearance of morbid symptoms, the blood shows early in the attack numerous patches of micrococcus in the field.

In cases of rapid sthenic disease with high temperature and great tissue change, the evidences of large quantities of fibrine with a tendency to coagulation are manifest. The rapid production of micrococci soon gives the mechanical impediment, and if stasis takes place from any other obstruction to the circulation, clots rapidly form.

The non-appearance of clots in malignant fevers attended with fluid blood, such as low forms of typhus, diphtheria, etc., is simply due to the fact that rapid tissue changes have resulted in decomposition, instead of into fibrine forming substances — no fibrine is formed, hence no clots, — but the micrococci are present all the same. These cases are held by some to be the malignant ones, but I think the *foudroyante* character of the others just mentioned entitle them to be placed in the same category.

But the micrococcus, if left unheeded, may attack the white corpuscle, as distinctly seen under the microscope, and destroy its contents. The red cells also change in appearance, and finally probably become, to all intents and purposes, useless in the economy. When such a condition is seen by the microscope and found extensive, a fatal prognosis can be given, despite the most active treatment.

In cases where the white blood cells are as yet unaffected, treatment, when active, will be followed by good results, provided the other complications, as visceral inflammation, etc., are not in themselves excessive.

Alcohol (whiskey in our cases) seems in some way, when given in large amounts, to check the progress of the marauders, to arrest the process of destruction, and, if needful, can be associated with quinine and iron in small repeated doses, digitalis perhaps, and frictions, baths, and poultices, etc. As we have seen, the symptoms presented are contemporary with the changes going on within the blood; they may, in lieu of a careful microscopic examination of the blood, be taken as a gauge for treatment; knowing what can and will take place, early active treatment will give the patient some chance for the future.

◆

A STUDY OF THE ACTION OF IRON.

BY FRANCIS H. WILLIAMS, M. D.

ABOUT two hundred and fifty years ago Lemery noticed that the ashes of animal tissues contained iron, and fifty years later Menghini showed that this iron was not in the flesh or bones but in the blood, and in one portion of the blood only, namely, the blood corpuscles; we now know that the three grammes or about forty-five grains of iron which are in the red blood corpuscles is about all the iron there is in the human system.

That iron had specific poisonous properties was not believed, and nearly all writers, both old and modern, have insisted that no toxic action was connected with this metal, especially as workers in iron were not affected by it.

At one time I supposed myself to be the first to have proved that iron was capable of acting in a manner resembling the poisonous metals, since in a full and carefully written essay on the literature of iron, published while my experiments were going on, the author states that iron is the only one of the heavy metals which has no unkind action on the system; but this was an error, two experimenters at least having observed the toxic action of iron.

As regards experiments with this metal, it should be said that the manifestations of its action are not as marked and its study is less interesting than that of many other drugs, particularly those which act on the nervous system.

As a very large number of experiments were made, in a paper of this length it will be possible to give you only an outline of a few of them.

We will first consider the effect of introducing iron into the system, then the symptoms which it causes, and the post-mortem appearances. After this we will endeavor to explain the cause of death, and compare the action of iron with that of arsenic and platinum, and finally we will discuss briefly two theories regarding the tonic effects of this drug, together with some clinical facts and precautions.

In making the experiments, in order to be sure that the iron got into the system, it seemed best to introduce it directly into the veins, but this had to be done without causing coagulation of the blood, and a number of trials were made to find a suitable solution; of several salts of iron a freshly-made, clear solution of the tartrate of iron, neutralized with caustic soda, was found very convenient, as it did not cause any inflammation at the point of injection, and did not in any way obstruct the circulation by causing thrombosis. A small quantity of such a solution would kill a frog in from twenty-four to forty-eight hours, and in experiments on a number of rabbits it was found that the fatal dose of iron per kilogramme of the animal varied from ten to twenty milligrammes, or one fifteenth to one seventh of a grain per pound weight of the rabbit; that is, the fatal dose for a rabbit of average size was about one third of a grain of iron. Death followed in from six to twelve hours after the injection. There were no signs of thrombosis, especially in the lungs, where one would expect to find emboli if they were to be found at all.

It will be asked, How do you know that the iron was the cause of death? may it not have been due to some other constituent of the tartrate of iron? In order to answer this question, a solution of the tartrate of soda was made, and eight to ten times as much of this as had been used of the iron salt was injected in the same manner into each of several rabbits without causing any unpleasant symptoms whatsoever. Shortly after receiving the iron the animals seemed well, and the appetite was good until within a few hours of death, when a disposition to keep quiet, and an apparent weakness accompanied by frequent liquid stools, was observed. In the few cases where death was witnessed there were three or four short convulsions, accompanied by opisthotonos, lasting, with intermissions, about ten minutes, and suggesting death from asphyxia. The muscles and nerves responded to electric stimulus both immediately before and after death.

Post-mortem examination showed the small intestine to be pale and strongly contracted, the upper part for a distance of forty centimetres, about sixteen inches, from the pylorus was distinctly reddish in color; the blood-vessels of the mesentery were dilated; the liver and kidneys very much congested, especially the liver. Bladder and lungs normal; heart sometimes in diastole and sometimes in systole. In the brain and its membranes no abnormal appearances were detected. The blood in both arteries and veins was of a dirty-claret venous color. Arterial blood also showed the same peculiar color during life, which changed to nearly normal arterial color after being exposed some time to the air.

The rabbits were all weighed; the amount of fluid and the quantity of iron injected, and the various symptoms which followed, were all carefully noted, but for the sake of brevity most of this is here omitted.

The fatal dose for cats seemed to be somewhat larger per kilogramme than for rabbits. The symptoms, which began from one to three days after the injection, were loss of appetite, vomiting, which took place as a rule directly after eating, diarrhœa, the stools being rather frequent and liquid, and loss in weight, about twenty per cent. in five days. In one case the above symptoms continued for six days, after which both milk and meat were taken most eagerly, and recovery seemed to follow immediately. About eighty to one hundred milligrammes, or one and a half to two grains, of the iron was a fatal dose for a cat. Further experiments showed that about the same proportion, or rather less, is true of dogs. The dogs died in periods varying from twelve hours to six days after the injection.

From these facts it is evident that we have in iron probably not a dangerous agent, but at least a drug of more toxic qualities than is generally imagined.

Let me endeavor to give in outline something of the symptoms which follow the injection of a fatal dose of iron in dogs; as an example let us take a large dog which weighed fifteen kilogrammes, or about thirty-seven pounds. Into the vein of the leg enough of the tartrate of iron solution was injected to represent one half a gramme, or about seven grains,[1] of metallic iron. The injection took place at four o'clock in the afternoon; nothing out of the way was noticed on this day. Next morning the animal ate his food as usual, but later it was vomited; from this time on he took nothing more to eat, but was very thirsty, the water which was taken being vomited immediately. On the third day whenever water was taken it was vomited directly, and in the evening he became very weak, sleepy, apathetic, collapsed, and died.

In some cases the vomitus was at times tinged with fresh blood, and sometimes there were a number of dark, bloody, liquid discharges from the bowels. In other cases a ravenous appetite came on on the fifth day, and the animal recovered within a day or two later. The vomiting seemed to come on only to empty the stomach; it ceased as soon as this was accomplished, and returned only when something was taken into that organ; in short, its character suggested that the stomach was intolerant of, and sensitive to, the irritation caused by the presence of any substance, even a liquid. The symptoms directed attention chiefly to the intestines and stomach. Post-mortem examinations were made in all cases; the lungs, liver, and kidneys were found congested, but most striking were the appearances in the stomach and intestine. The blood, both before and after death, had a very dark venous color, and was the same in both arteries and veins. In detail the appearances found in the intestine in one of the cases was as follows: on opening the abdomen the intestine was found contracted and seemingly empty. The intestines and stomach were removed from the body; they were then opened longitudinally and spread out on a table. The stomach contained about fifty c. c. (about two ounces) of a thick mucus, dark brown in color, and containing blood-coloring matter; the same liquid was found smeared over the mucous membrane of the upper two thirds of the small intestine. After washing off the inner surface of the stomach it was found to be of a nearly uniform dark-brown color, somewhat darker at the pyloric end. In the small intestine the mucous surface of the duodenum was of a bright blood color; on close inspection it could be seen that this appearance was made up of red points scattered thickly over the inner surface of the intestine. These appearances were confined to the mucous coat, and were found to some extent over the whole length of the small intestine, but of much less intensity in the lower portions. The lining of the large intestine was somewhat hyperæmic.

---

[1] Less than average dose.

From the hardened specimens a number of sections were made for examination under the microscope. In the sections from the duodenum the villi were found much congested in many places, thus explaining the fine red points described above. Sections taken from the lung showed marked engorgement of that organ, and those from the kidneys and liver also showed congestion, though not to the degree observed in the villi and lungs.

It is not only when iron is introduced into the veins of animals,[1] but also when given by the stomach in large doses, that death has followed, and appearances have been found similar to those already described. But more than this, it has been observed in healthy men that very large doses of iron caused weakness, a disposition to sleep, colicky pains in the region of the stomach, and vomiting. The blood was also darker than normal.

It has lately been suggested by Beranger-Feraud[2] that death may be caused under certain conditions by a solution of perchloride of iron; he found that in cats and dogs death followed the ingestion of comparatively small doses of perchloride of iron if taken on an empty stomach and with a small quantity of alcohol, as these conditions seemed to favor the rapid absorption of the drug. He cites three instances where he thought death had been caused in men by the perchloride of iron, which was taken in punch, and he thinks that one or two teaspoonfuls of liquid perchloride of iron, if given on an empty stomach and with a small quantity of alcohol, would be sufficient to cause death in a man.

From our own experiments we may infer that an iron salt introduced into the system in a certain amount will cause death; this is due to the iron, and not to any other constituent of the salt, since a similar salt of another element, although given in much larger amount, causes no symptoms. Further, we have seen how the alimentary canal is conspicuously disturbed and the blood changed in color.

It will be asked of what do the animals die? Is it in any way connected with the alimentary canal, where the appearances are so marked? Probably not, as we have in some cases all the symptoms indicating irritation of the stomach and intestine without a fatal result; also, this seems only to prevent the animal from taking food, and death from starvation will not occur in four or five days, as animals can live a much longer time without any nourishment. It is probable that death is brought about in other ways. You remember that the blood, both arterial and venous, had a peculiar color; this suggested an examination of it. Under the microscope no changes were detected, at least not with certainty, although a change in the form of the blood corpuscles was for a time imagined; but thinking from the venous color of the arterial blood to find an unusually large amount of carbonic acid gas in it, Dr. Meyer and myself made some gas analyses of the blood, and to our surprise found the carbonic acid present in much less than normal quantity instead of being increased. In some cases only one fifth the normal amount of carbonic acid was found. Preliminary to these experiments, as no analyses of the gases in normal dog's blood could be found, it was necessary to make some, in order to ascertain the amount of carbonic acid and of oxygen normally present. It was found that in one hundred parts of blood there were twenty-five parts by volume of carbonic acid gas and about fifteen parts of oxygen; that is to say, about twenty-five per cent. of CO_2 and fifteen per cent. of oxygen. After injecting iron the oxygen was found in normal amount, but of the carbonic acid only ten to twelve per cent., one half the normal amount, and sometimes only five per cent., was present. The carbonic acid was not held in combination in the blood, as a carbonate, since no more gas could be obtained by treating the blood with acid to decompose the carbonate.

From this we may infer either that the iron in some way hinders the blood from taking up the products of decomposition from the tissues, or that the process of oxidation is incomplete.

It is not improbable that the collapse and paralysis of the central nervous system which accompany death may be a consequence of diminished oxidation; this view gains color from the fact that the amount of carbonic acid in the blood was found to be less and less the nearer the time of death. Arsenic and platinum, both of which metals give rise to diarrhœa, vomiting, and other symptoms similar to those following iron, were found to cause a similar diminution in the carbonic acid in the blood. It may also be mentioned, in passing, that these metals, as well as iron, seemed to have a similar effect on the arterial blood pressure, causing it to be less than normal. All this suggests that these metals may have an action on the economy similar to that exercised by iron.

To recapitulate: we have seen that iron has without doubt poisonous qualities; that the symptoms which it causes come chiefly from the alimentary canal, and that in fatal doses it diminishes the amount of carbonic acid gas in the blood; that the action of iron on the economy probably resembles that of arsenic and platinum, and that we are justified in believing that the action of iron on man in excessive doses would be similar to that observed in animals.

Let us now turn from our experiments and consider the *tonic* action of iron as observed clinically. For many years the good effects following the administration of this drug have been recognized, and in general two theories have been advanced to explain them: the first, that its good effects are produced by its action on the red blood corpuscle; the second, that it exerts a special influence on the digestive system. Regarding the first of these, we know that iron is a constituent of the red blood corpuscle; that in anæmia the number of red blood corpuscles is less than normal, and after using iron they are increased, so that on our first theory it is only necessary to supply a little iron in order to have plenty of red blood corpuscles; and as these notoriously play an important part in the economy. once having a good supply of them many good results follow.

---

[1] Arch. f. Experiment. Pathologie u. Pharmakologie, xiii. Bd. 70 u. 73. Frank. Mag. f. Physiol. u. klin. Argument u. Toxikol., 1845, ii. 369 u. iv. 173.

[2] Annales d'Hygiène Publique, 1879, 508.

We must remember, however, that only one thirtieth part of the red blood corpuscle is iron, and that there are only three grammes, or forty to fifty grains, of iron in the blood, and only a portion of this is likely to be wanting at any time. Since there is a small quantity of iron in almost every food we eat it would seem that any deficit in iron can never be very great, not more than a fraction of that normally present. It is also well known that it is not by a few doses of iron that its good effects are obtained, but only after continued use; if the system needs to have a small deficiency in its iron made good it would seem that a comparatively few doses would suffice, but it is well known that it must be continued for some time to obtain its full benefit.

For the second theory, that iron promotes the action of the digestive system, the evidence afforded by experiments on animals, both when given by the stomach and the circulation, as well as the symptoms aroused in man when large doses are given, leaves little doubt that iron has some especial action on the digestive organs, and particularly on those portions where absorption takes place, namely, in the stomach and upper part of the small intestine. Since it seems to increase the amount of blood sent to these parts, and especially to the villi of the small intestine, it seems probable that it may exercise a beneficial influence on the process of assimilation. Claude Bernard[1] says that the salts of iron have a special action on the mucous membrane of the stomach, and that all parts with which it comes in contact take on a more active circulation. He attributes this, however, merely to its acting as a local irritant. Bartholow says that "physicians are familiar with the fact that iron improves but little if at all the condition of the anæmic when it does not increase the desire for food and the ability to digest it."

We find that, clinically, arsenic is often used as a substitute for iron, and with good results; there is certainly no arsenic in the blood corpuscles, but excellent results are obtained from arsenic, a metal which causes experimentally symptoms and appearances remarkably similar to what are found with iron.

As regards the blood corpuscles, may not their increase, on which so much stress has been laid by some writers, be one of the consequences of better nutrition, since in this case not only iron but all the other constituents of the blood corpuscle are supplied?

As regards the prescribing of iron, it may fairly be said that among the hundreds of preparations a half a dozen may be chosen, such as the tincture of the chloride, the reduced iron, the tartrate of iron and potassium, etc., which will answer any indication, and there is little excuse for the extraordinary number of preparations of this drug.

Trousseau and Pidoux, in their treatise on therapeutics, say that they had for a long time regarded iron as an innocent drug, which it was not easy to abuse, but after more experience in practice they do not hesitate to say that they have seen patients whose death ought to be imputed to the excessive administration of iron, and they insist that in the early stages of phthisis it is especially hurtful, as it is apt to promote hæmoptysis.

The results, therefore, of experiments and clinical observations show that iron is no exception to the general rule which holds good for all the other heavy metals, such as platinum, copper, arsenic, etc. In excessive doses it would be possible to produce deleterious results, and it should not be given as if it were a medicine incapable of abuse. It would seem that the good following its use is due to its action in promoting digestion and assimilation rather than to the increase in the number of blood corpuscles, which is probably a result of the improved nutrition.

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

"MEGALOGLOSSIA."[2]

PARROT having had under his care two cases of this rare disease makes it the subject of a clinical lecture. He says that the prominent feature of the affection is prolapse of the tongue, which is enormously enlarged in every direction, and is of a deep violet color, covered with a thick whitish coat: the veins of the frænum are much developed. This swelling is not a glossitis caused by certain poisons, such as mercury, or by the stings of insects, nor is it the temporary congestion caused by convulsions and whooping-cough, but it is a congenital malformation, which increases after birth. The protruded tongue becomes indented and even ulcerated by the teeth, which are gradually pushed forward, laid bare, and become carious. The saliva continuously flows from the mouth, the lower lip becomes thickened and ulcerated, and the dragging forward of the lip, larynx, and velum palati by the weight of the tongue, renders suction, mastication, and deglutition difficult, thereby interfering with nutrition. While some observers regard the morbid condition as due to hypertrophy of the lingual muscles, others, as Virchow and Billroth, explain it as the effect of an overdevelopment of the lymphatics. This deformity seems to be especially associated with certain other bodily disproportions; thus the trunk is relatively much larger to the limbs than normal, the latter being thick and short set, and the legs appearing bowed from the enormous muscular development on the posterior and outer sides. The hands and feet are large, thick, and purple. Notwithstanding the muscular development, one of his cases, a child of two years, could not walk, had no teeth, was markedly prognathous, and had the face of an idiot; it also had an unclosed fontanelle, a cardiac murmur, and an umbilical hernia.

Another case, a child four and a half years old, although having all the temporary teeth except the lower canines, resembled the other in being unable to walk, and in presenting a murmur and a hernia. The post-mortem examination of this child showed the brain to weigh 755 grammes, the normal weight at that age being 1190 grammes. No gross lesions were noticeable in the brain and spinal cord.

The heart weighed fifty-five grammes, and was remarkable for its conical form and for the predominance in size of the left ventricle. The aortic orifice was narrowed by thickened and rigid valves, while the vessel itself was atheromatous; the pulmonary cusps were also thickened. The tongue weighed forty-six grammes; the kidneys were healthy, and the muscles were of normal appearance. One of the most striking features of the disease is the coincidence of arrest in the development of the brain. M. Bresson has met this deformity in anencephalous monsters. Cretins also, whose cerebral deficiency is undoubted, are characterized by a thick, pendent lower lip, large, swollen tongue, big lower jaw, and their teeth are carious and wide apart, the permanent ones seldom replacing the temporary set. Whether one and the same cause has brought about the cerebral atrophy and lingual hypertrophy, or whether the tongue has grown at the expense of the deficient brain, or to what extent the imperfectly developed heart may lead to this condition, are questions as yet unanswered.

---

[1] Trousseau and Pidoux.

[2] Gaz. Med. de Paris, December 10 and 17, 1881.

Dr. Clemens Paster[1] has also written a careful article on this subject, and given especial attention to its literature from the earliest times. He notices a slight predisposition of females for the disease. The author then reports the case of a male infant six months old and otherwise well and apparently strong, who was brought to Professor Ranke's clinic with a decided enlargement of the tongue. The root and back of the tongue had a doughy, almost fluctuating feeling, not sharply defined. The mucous membrane showed signs of acute inflammation. There were swollen glands under the chin, and the upper lip and lower part of the cheeks were slightly intumescent. These appearances were evident soon after birth. In the next two months there was a great increase in the size of the organ, causing difficulty in breathing and general atrophy, from which the child finally died at the age of eleven months. At the post mortem, the above mentioned almost fluctuating tumor was found to be composed on its surface of several cysts, the walls of which were in parts so thin that their contents were easily seen, in other parts they consisted of thick connective tissue. The cysts contained a clear white or yellowish fluid. On section small cavities were found lying closely together, and at times only separated by a thin wall. The thyroid gland was drawn upwards, but showed no changes. The submaxillary glands were dislocated downwards. The tongue was enlarged in all directions, but its mucous membrane showed very little change. On section a peculiar cavernous tissue was found resembling the common cavernous blood tumors, excepting that the contents of the cavities were the same serous fluid, partly fluid and partly coagulated. A more extended macroscopic examination showed that the abnormal changes depended on the lymph vessels, and this was corroborated by the microscopic appearances, a minute description of which is given in the article.

Similar appearances were found in the subcutaneous tissue of the neck, lips, and cheeks. Paster then speaks of the researches of Billroth, which prove that there are two different forms of "makroglossie;" first, a "macroglossa fibrosa," where the connective tissue is pathologically increased between the muscular fibres and remains in this condition, and second, a cavernous-cystoid degeneration of the interstitial connective tissue, by which the resulting spaces come into connection with the lymph vessels, forming a "macroglossa cavernosa," which has a close resemblance to the cavernous angioma, and from this receives its name of lymphangioma cavernosum. Billroth thinks also that both forms may be found combined.

Paster concludes that (1) the cavernous macroglossie and macrochilie is to be sharply defined from the fibroid form, which has the same external appearance. (2) Cavernous macroglossie and macrochilie is to be considered a true new formation. (3) This new formation has from its connection with the lymphatic system a decided relation to elephantiasis arabum and pachydermia lymphangiectatica, yet it cannot be idenified with these processes, and is not to be considered a partial elephantiasis. (4) In conformity with its development, and from its macroscopic and microscopic relations, it belongs to the cavernous angioma, and is analogous to the cavernous vein tumors. (5) Its origin is partly from an increase of previously formed lymph vessels, and partly from a new formation of them. (6) Its ætiology is not explained.

INFLUENCE OF DRUGS ON THE SECRETION OF MILK.[2]

Dr. Max Stumpf has lately written a most interesting and exhaustive article on the influence of drugs on milk, and he precedes his own investigations on this subject by a detailed account of what has been done by former experimenters, and also by certain historical facts bearing upon the production of milk. A valuable addition to the article consists of an extensive table of references to the literature of the subject, carried back to the earliest observations made both on animals and human beings. The author states that up to the present time the various theories concerning the action of drugs on the milk have been empyrical. The condition which determines the quantity and quality of the milk depends on the development of the organ which produces it. It is known that animals of the same breed, with exactly the same surroundings and nourishment, show great differences in the production of milk, and that it is not the case that the largest and strongest animals always give the richest milk. Those species of animals which have for over a thousand years been used for the production of milk, probably did not in the beginning give such an over-production as is actually the case now. In fact, in Egypt, where, formerly, there was either no trade in milk or very little, we find represented on the monuments cows with only slightly developed udders, and goats and sheep without any, while the generative organs of the male animals are clearly depicted, a fact of some significance when we remember the well-known tendency of the Egyptians to realistic representations. It is, then, by breeding that animals have been made to produce so much more milk than is necessary for the support of their young. Not only quantitative but also qualitative differences exist, partly from the influence of race, and partly from differences in development of the mammary glands, as Martiny[3] has shown in his collection of statistics on this subject, and it is interesting to note in his results that the fat, albumen, and sugar do not correspond to the total amount of the milk production, but that, on the contrary, an increase in the total amount is accompanied by a decrease in the relative amount of the solid constituents. As to the relation of the single constituents to each other, researches show that there is no constant relation for the different races. Vernois and Becquerel [1] found in women almost no qualitative differences between badly and well developed glands, while there were great differences resulting from investigations on extremely poorly developed glands in comparison with those which were greatly developed, the former producing milk which was poorer in water and richer in fat. Age has less influence than development on the quantity and quality of the milk. The author then states that the investigations which have so far been made on the quality of cows' milk at different ages are not very reliable, and quotes in support of this view the different results obtained by such observers as Vernois and Becquerel, Boussingault,[2] Müller,[3] Heineman,[4] Kuhn,[5] and others.

---

[1] Paster, Ueber Macroglossie und Macrochilie. Jahrb. für Kinderh., xviii. Band., 2 und 3 Heft.

[2] Deutsches Archiv für klinische Medicin, January 18, 1882.

[3] B. Martiny, Die Milch. ihr Wesen und ihre Verwerthung Danzig, 1872.

The influence of acute and chronic disease upon the milk has not yet been much studied, but in nineteen cases of various kinds, such as typhoid, pleuritis, and pneumonitis, observed by Vernois and Becquerel, there was a striking similarity in that the whole amount produced was decreased, and without exception there was a lessening of the sugar. In two of the cases there was a decided increase of the solid constituents; there was no definite change in the amount of the fat. Stumpf then reviews the various views held as to the physiological production of milk by Pettenkofer, Von Voit, Stricker,[6] Partsch,[7] and others,[8] showing that milk is not a simple transudation from the blood, but that it is made by the cells of the milk glands, and that in the process these cells are not entirely destroyed, but that their function is to give up their contents, and to then begin again anew. He next speaks of the experiments made on the nerves supplying the mammæ, and of the results obtained by Eckhardt,[9] who, by direct irritation of the nerves, found that it was the vaso-motors which, by their action on the blood pressure, influenced the secretion of the milk, and those of Röhrig,[10] who, by using drugs which increased or decreased the blood pressure, produced a greater or less flow of milk, the deductions from these two sets of experiments being that the elaboration of the milk corresponds to the speed of the blood current. An examination of the slighter changes in the composition of the milk is the more difficult, as spontaneous changes, that is,-without definite causes, take place in the milk from day to day. Drugs which accelerate the destruction of albumen in the body generally increase the fat, and perhaps also the milk sugar. On the contrary, those drugs which delay the decomposition of albumen have an opposite effect, and no change in the quantity of the milk results from giving these drugs.

The investigations made to determine whether drugs can be eliminated by the milk in sufficient quantity to prove poisonous are not exact, and the quantitative analysis is especially at fault. It is well known, however, that drugs can pass into the milk, and produce a medicinal effect, and Deyeux [11] and Fuchs [12] have made careful chemical studies on different animals with reference to detecting coloring matters and various oils, as linseed, camphor, and turpentine oil. Ether was found in the milk after it had been administered for two hours, and Scanzoni [13] found chloroform. Well known instances of infants being poisoned by animals which have fed on conium and colchicum, and also where the mother has taken scammonium and opium, are recorded. The first scientific investigations in this direction were, however, made by Chevallier and Henry; their experiments were qualitative, and proved that it was possible to detect in the milk, as foreign bodies, chloride of sodium, carbonate of soda, sulphate of soda, iodine, iron, zinc, and bismuth. They failed to find nitrate of potash, quinine, and mercury.

Lewald [14] made the next extensive series of investigations with about the same results, though his experiments with alcohol and narcotics were negative. In the history of these investigations we find great differences of opinion regarding the elimination of mercury by the milk, a number of observers denying that it could be obtained chemically. Lewald, however, by means of improved methods of analysis, claimed to have found it, and later undoubted results were obtained by Klinik,[15] Vajda, Paschkis,[16] and others.

Other investigators, however, using the same methods, have so often failed to find it that it is probable that, as Richelot [17] suggested, its elimination by the milk depends on individual peculiarities. As to the drugs which affect the quantity of the milk, the recent investigations of Prockownik [18] with belladonna and atropine show that these drugs are at least not reliable for treating galactorrhœa. Stumpf then says that most of the numerous observations which we meet with in the history of this subject, and of which he has cited the most important, are rendered less valuable by the slight regard which they pay to the quantitative analysis. The fact that foreign matter can pass into the milk is well known, the question is in what quantity it enters, in what combinations it appears in the milk, and, most important of all, whether through changes in the chemical composition of the milk, changes of relation between its various constituents will be caused. The fact that traces of one or the other drug were found in the milk is not nearly so interesting as the question whether these traces influence the amount of the secretion or change its quality, in other words, whether they can alter the activity of the glands. The author's investigations on goats were made at the Central Veterinary School at Munich, and the chemical analyses were performed in the Clinical Institute of the University. Similar experiments on women were made in the Lying-In Institute at Dresden, the chemical analyses being made in the laboratory of the Dresden Polytechnic, all the investigations being rendered more valuable by the advice of such men as Ziemssen, Bauer, and Winckel.

---

[1] Recherches sur le Lait. Annales d'Hygiène Publique et de Médecine Légale, T. I. L. u. L., 1853.

[2] Boussingault, Die Landwirthschaften ihren Bezichungen zur Chemie Deutsch von Gräger. Halle, 1845, Bd. II.

[3] Müller, Chemis. Untersuch. auf dem Gebiete der Milchwirthschaft. Landwirthschaften Versuchstationen, vi., 1864.

[4] Heineman, Die Rahmhaltig der Milch. u. s. w. Mittheil. des land- und forstwirth Provinzialverein Hildesheim, 1854.

[5] Kuhn, Landwirth. Versuchstationen, 1869.

[6] Pettenkofer und Voit, Annalen der Chemie Pharmacie II. Suppt. Band, 1860.

[7] Stricker, Ueber contractile Körfer. Sitzungsber. der Wiener Akad. der Wissenschaft., Bd. 53, Abth. ii.

[8] Partsch, Ueber den feineren Ban der Milchdrusen. Breslauer ärztlichen Zeitschrift, 1879, No. 20.

[9] Eckhardt, Beitrage zur Anatomie und Physiologie, Giessen, 1855.

[10] Röhrig, Experimentelle Utersuch. über die Physiologie. der Milchabsonderung. Virchow's Archiv, Bd. 67.

[11] Deyeux, Precis d'Exper. et Observat. sur les different Éspèces de Lait, 1800.

[12] Fuchs, Magazin für die gesummte Thierheilk., Bd. 7.

[13] Scanzoni, Beitrag zur Geburtsk., Bd. ii.

[14] Lewald, Untersuch. über den Uebergang. von Arzneimit in die Milch. Habilitationssch. Breslau, 1857.

[15] Klinik, Vierteljahrs. für Dermatologie und Syphilis, iii.

[16] Vajda und Paschkis, Ueber den Einfluss des Quecksilbers auf den Syphilis Process. Wien., 1880.

[17] Richelot, Schmidt's Jahrb., Bd. 133.

[18] Prockownick, Zwei Fälle von Galaktorrhœ. Centralbl. für Gynäkol., 1878, No. 1.

The chemical analyses are carefully described and tabulated, and are important so far as they are exact for individual cases, but more observations are needed to eliminate the errors which may arise from experimenting on a few cases. He arranges his results as follows: —

I. Changes in the quantity of the milk.

(1.) Iodide of potash causes a decided lessening of the milk secretion.

(2.) Alcohol, morphia, and lead did not change the quantity.

(3.) Salicylic acid seemed to somewhat increase the quantity.

(4.) Pilocarpine did not increase the quantity.

II. Changes in the quality of the milk.

(1.) Iodide of potash causes a disturbance of the glandular function, and thus the quantity of the different ingredients fluctuates.

(2.) Alcohol and alcoholic drinks only relatively affect the fatty ingredients of the milk, and are not to be depended upon as a dietetic means of increasing the milk secretion.

(3.) Lead, morphia, and pilocarpine do not change the quality of the milk.

(4.) Salicylic acid appears to cause an increase of sugar.

III. Appearance of drugs in the milk.

(1.) Iodine appears quickly in the milk, and in human beings disappears immediately at the conclusion of the administration of the drug. In herbivora the iodine remains longer in the milk. The quantity of iodine entering the milk is not a definite fractional part of the amount of the drug administered, but varies with the individual. A therapeutic use of iodized milk is therefore not advisable. The iodine in the milk is not eliminated as iodide of potash, but is combined with the casein.

(2.) Alcohol does not appear in the milk of herbivora.

(3.) Lead is only found in traces where small quantities are given, and evidence of its presence outlasts for some time the administration of the drug.

(4.) Salicylic acid is found in small quantities when large doses have been given, and in somewhat larger quantity in human beings than in herbivora.

ACUTE DILATATION OF HEART.

Steffen[1] states that according to his experience the causes of acute dilatation of the heart in children may be classed under three divisions: (1) Endocarditis. (2) Increased blood pressure. (3) Infectious diseases. The first cause is not of such very rare occurrence; the left ventricle is usually the part affected where endocarditis is the cause, and the development of the endocarditis is always attended by high fever. The symptoms differ according as the inflammatory condition has begun in the valves or in the cardiac walls. In the former case the signs of dilatation accompany those of valvular disturbance, while in the latter the symptoms of dilatation come first and are followed later by the mechanical results of valvular insufficiency. Death may take place at the height of the attack, or after days and weeks there may be a retrogression of the morbid process. If it was the walls of the heart that were affected, the heart may regain its normal size and position, and likewise the accompanying valvular symptoms may disappear. If the valves alone or with the walls were affected, recovery can still take place. If the valvular deficiency remains, still in spite of the acute dilatation having taken place, secondary dilatation and hypertrophy may arise. Entire recovery is more frequent when the endocarditis has been caused by chorea than by articular rheumatism. Processes which suddenly cause great increase of the blood pressure in the lungs may lead to acute dilatation of the right ventricle; this is especially liable to take place where there is diffuse extravasation into the alveoli and bronchioles, and in the intercurrent emphysema occurring in the course of pertussis. Acute dilatation of the left ventricle may occur in diffuse renal inflammation, and where contraction of the renal substance takes place the dilatation is followed by hypertrophy. As an illustration of this last cause the following case is of interest: A boy twelve years old was admitted to the Children's Hospital with rheumatism, nephritis, and a weak dilated heart, September 1, 1881. On September 3d the urine was much lessened in quantity, and the dilatation of the heart increased, with headache, vomiting, and convulsions; by September 11th the urine had increased in amount above the normal, with a corresponding increase in the strength of the heart, which returned to the same size as it was on entrance; the albumen was also reduced to a trace; this state of affairs with occasional fluctuations continued until September 25th, when percussion and auscultation showed the heart to be normal. The amount of urine was now above the normal, and the specific gravity low; the albumen and casts were much lessened, and the child was discharged comparatively well on November 14th, with symptoms pointing towards contracted kidney and hypertrophy of the heart, the latter having gradually developed from September 25th. Steffen reports the case of a boy eleven years old, who was seized with symptoms of acute dilatation following carbolic acid poisoning resulting from the use of this antiseptic for amputation at the right knee-joint; the dilatation disappeared in a month, leaving the heart apparently normal.

It is possible that with each onset of infection a slight weakening and dilatation of the heart takes place, followed or not by pronounced symptoms according to the severity of the poison.

Acute dilatation may also follow typhoid and scarlatina; an instance of the latter was the case of a boy six years old, who was admitted to the hospital November 20th, with general anasarca following scarlet fever; the heart was normal; the temperature was slightly raised; the pulse and respirations were quickened. November 23d there was dyspnœa, cyanosis, vomiting, albuminuria and increase of cardiac dullness, with great weakness of the heart's action; this state of affairs increased, and then the symptoms gradually lessened in severity until December 13th, when the heart was found to be normal and the child entirely well.

The author concludes by saying that we should not omit examining the heart in all acute diseases.

HEART TUBERCLE.

Hirschsprung[2] reports an interesting case of a girl eight years old, who was a healthy looking child, but on admission to the hospital had serious symptoms pointing to the cardiac region, and represented by a tumultuous action of the heart, diffuse pulsation, increased cardiac dullness, slight cough, heightened temperature, and increased respiration. Dyspnœa and cyanosis set in and the child died seven days after entering the hospital. A tubercle as large as a walnut was found in the internal wall of the left ventricle; a few miliary tubercles in the anterior part of the left upper lobe, and nowhere else in the lung; the bronchial glands, especially on the left side, were found in a state of cheesy degeneration, as were also the mesenteric glands; there were tubercles in the spleen and pericardium. The liver and spleen were enlarged, and the intestinal glands swollen but not ulcerated.

---

[1] Steffen, Jahrb. für Kinderh., xviii. Bd., 2 und 3 Heft.

[2] Jahrb. für Kinderh., xviii. Bd., 2 und 3 Heft.

SALICYLATE OF SODA.

Pinsker[1] concludes from a large number of observations on the use of this drug in children, that its ill effects, such as loss of appetite, nausea, vomiting, ringing in the ears, giddiness, deafness, at times appearances of collapse, albuminuria, erythema, and urticaria, are oftenest seen when the drug is impure. While finding it almost a specific in acute rheumatism, it exerted very little effect on diphtheria, pertussis, and typhoid, and was useless in intermittent fever.

WEIGHTS OF INFANTS IN THEIR FIRST YEAR.

Dr. Camerer[2] contributes a valuable set of tables showing the weights of twenty-one infants during their first year; the ages of the parents are given, also the changes in the food in the different weeks and the diseases which occurred.

Recent Literature.

On Cancer of the Breast. With Colored Illustrations. By THOMAS WILLIAM NUNN, F. R. C. S. Eng., Consulting Surgeon to the Middlesex Hospital. London: J. and A. Churchill, New Burlington Street. Quarto, 230 pages. 1882.

Mr. Nunn has here furnished a superb work. He has divided it into two parts: the first Clinical and Practical; the second, Pathological and Speculative.

The one is based on some thirteen hundred cases in the wards and out-patient departments of the Middlesex Hospital, and also on one hundred and twenty-three autopsies. The other embraces the views of most of the German and French, and many English, authors, together with numerous microscopical sections, and discusses the causation, course, and nature of the disease. To this is added a Discussion on Cancer at the Pathological Society of London in 1874, being chiefly an abstract of the opinions of various members.

"With the theorist," says Mr. Nunn, "everything is either an epithelial cell, or a connective-tissue cell, or a specific cancer cell."

The cancer cell of Lebert does not exist. "There is no such thing as a specific cancer cell *in respect of form.*" The organism does not produce, even in disease, elements which are foreign to its physiological condition. The cells to which cancer owes its origin are only derivatives of precedent cells existing in a state of nature. Whatever their enormities of morbid growth and combination, they are still only the deformed descendants of some originally healthy cell.

All the German authorities quoted derive cancer from the epithelial cell.

The epithelial cell and embryonic tissue constitute cancer. It may be defined as *a cell growth of low vitality, and short lived, ending either in atrophy, or in a vascular hypertrophy and gangrene.*

In examining with the microscope a section of scirrhus of the breast, we see masses of grouped cells; beyond their area are smaller cells, called "lymphoid," and surrounding the grouped cells a fibrillar "stroma." The same arrangement of grouped cells, stroma, and lymphoid cells, is found in the lymphatic glands of the axilla, which have become cancerous, and also in cancers of other parts. This appearance is not due, then, to the acinous structure of the breast. The small cell element, the lymphoid, or wandering cells, appear to take the most active share in secondary invasions.

The epitheloid cell of cancer is short lived; soon degenerates and atrophies; it is marked by its non-coherence; it sloughs, decays, discharges, and hence infects vessels and lymphatics. Whenever cancer provokes great vascularity of surrounding tissues, it does so by inflammatory effusions, suppuration, and mortification. Cancer does not have the rapid and unlimited growth of sarcoma. Neither does it attain so large a size. It grows and dies; peaceably by atrophy and shrinking, as in slow forms of scirrhus of the breast, or violently by sloughing, ulceration, and absorption. Its growth sometimes kills the patient by pressure or constriction of vital parts, as the œsophagus; its death is fatal to the sufferer by poisoning the blood by absorption.

And here it must be carefully borne in mind that the cancerous cachexia, the sinking of the general health, does not take place in the growing stage, but not until foul, ulcerative absorption has taken place. It is a matter of common observation that the patient with a well-developed, but growing, cancer frequently is florid, well nourished, and apparently healthy.

"Cancer," says Nussbaum, "is an epithelial overgrowth. It is *not* infectious; no nurse ever caught it from a patient; no surgeon ever infected himself with cancer by cutting his hand during an operation." "In examining," says Nunn, "a range of cancer tumors, in one we may identify the cells as epithelial cells, but there are too many of them. Their development outstrips functional necessity. They embarrass the action of what is adjacent to them, and, in time, they stop mechanically their own supply of nutriment. They soften, decay, and slough; that is, they die. If all died at once the disease would be at an end, self-cured. But, unfortunately, the death of part gives liberty and the occasion of growth [to the rest], and the mischief goes on by repetitions and extensions of its area. Tissues and neighboring glands become involved; the capillary channels participate in the change of form, distribution, and size, and the result is the confused medley of sprouting epithelioma."

In the one hundred and twenty-three autopsies of cases of cancer of the breast the secondary invasion of lymphatic glands, and of the pleura and lungs, are proved to be very frequent. Seventy-three out of 123 had the lymphatics secondarily affected; and in 52 out of 123 the lungs or pleura, or both, showed extensive cancerous infiltration. Effusion into the pleural cavity was a frequent cause of death.

As to the relative frequency of cancer of the breast compared with its affecting other organs, of 268 cases of cancer in the out-patient department of the Middlesex Hospital 157 were of the breast, and 47 of the uterus. But in 1000 cases of cancer in the wards of the same hospital 260 were of the breast, and 389 of the uterus. In Dr. J. Mason Warren's table of operations for cancer 59 out of 154 were of the breast.

---

[1] Archiv. für Kinder., vol. ii., part 12.

[2] Camerer, Jahrb. für Kinderh , xviii. Bd., 2 und 3 Heft.

In Mr. Sibley's table of 520 cases, 192 were of the breast, and 156 of the uterus.

From notes of Paget's cases Mr. Baker found in 500 cases of cancer 276 of the breast.

In the statistics of cases of cancer in England the breast and the uterus were much the most frequent localities affected. On the Continent (Germany) the stomach.

In France the order of relative frequency is placed as follows: stomach, uterus, liver, breast, rectum, mouth, male genitals.

As to period of life, cancer of the breast occurs most frequently from forty to fifty years. Mr. Nunn's 160 cases average fifty years. Mr. Sibley's 153 cases average 48.6 years. Of the Middlesex Hospital cases of the breast, 260 cases average 49.8 years.

In the female breast, then, there seems to be a direct connection as to the time when cancer is most liable to occur and the passing of the menstrual climacteric. It is also noteworthy that cancer of the breast never runs so rapid a course as it does when it develops during lactation. These cases are rare, but we have seen several in this community terminate fatally in one year:

Heredity, or the transmission of a tendency to cancer in families, is moderate in its influence. Mr. Nunn makes careful estimate of family histories in 1160 cases in the Middlesex Hospital. Heredity ranged from .16 to .29 per centum.

However tempting it may be to generalize from *statistics*, yet there are sources of error so numerous as to render the conclusions frequently worthless. These causes of error in statistics we attempted to point out in 1860.[1] On pages 164, 165, and 166 we fear Mr. Nunn has fallen into these errors. Such fallacious results are his statements about "regional transmission," that is, the chance of the child or descendant of a woman dying of cancer of the breast having not only cancer by heredity, but cancer of the breast, as distinguished from cancer of the uterus, for example. Again, a point is attempted to be made of the frequency of fibroid tumors of the uterus in patients with cancer, whereas it is well known that fibroid tumors of the uterus are among the most common things found in *all* autopsies of middle-aged women, no matter what the cause of death. So, too, the attempt to determine the geographical distribution of cancer seems a narrow and unsound generalization. Our author, after rehearsing his own cases, quotes Mr. Haviland as assuming that high and dry sites are relatively free from cancer; damp and alluvial regions by the water courses are prone to cancer. Says Mr. Haviland: "The Thames runs through a vast cancer field," and "there does not exist an important river in England or Wales, subject to seasonable floodings, that does not flow through high mortality districts" [from cancer, we presume].

Mr. Nunn furnishes a handsome map of England and Wales, dotted with cancer foci, prevailing largely in the southern end of the island. What infinite sources of fallacy are here, — the crossing of stock, the fluctuation of population, the migration of cancer-bearing families, the influence of occupation and sex, the chances of traumatism, the effect of habits of life, and above all the attempt to generalize a law among a population of millions from an observation of 1030 cases of cancer. We will venture to say that another one thousand cases could be found in that population where cancer existed, but was concealed in some hundreds and was falsely diagnosticated in many others.

The border lines between cancer and sarcoma, for example, would have to be much more sharply defined than they are now to the *average* medical observer to render the test of any value.

We pass next to an admirable digest of the protean opinions which prevail among the profession as to the *constitutional* or the *local* origin of cancer. Here is the vital point, to determine the value or folly of any operative interference. It is admitted by all observers that we know of no *cure* for cancer. No drug has frequently, much more uniformly, checked this dread disease. The surgeon's knife is but too often only a temporary, not to say temporizing, expedient. It is even questioned by some whether its use lengthens life. Brodie refused operation; but he was, according to his autobiography, not fond of operative surgery. For exactly the opposite views the reader is referred to Dr. Gross's monograph on Cancer of the Breast.

It is a curious fact that Benjamin Bell, so far back as 1782, advocated the local origin of cancer. Mr. Moore, in England, revived this theory in 1872. And the famous discussion in the Pathological Society of London, in 1874, was mainly on the local or constitutional origin of this disease.

The views of a very large number of surgeons and pathologists are given by Mr. Nunn. We are told that De Salle, Velpeau, Virchow, Erichsen, De Morgan, are localists.

Paget takes his usual broad view of the field, and asserts himself as partially believing both the constitutional and the local theories, with certain modifications.

Broca, ("on Tumors," 1876) sums up his belief as follows: "Besides the local diathesis proper to each tissue there is a general diathesis or condition of the organism preceding the first appearance especially of cancerous tumors. The diathesis produces the primary cancer; the primary cancer produces the general infection; the general infection produces secondary multiple tumors, cachexia and death. The primary cancer invades the organism by absorption of the blastema, or by direct inoculation through ulcerated veins." For the word blastema substitute absorption of the small lymphoid and wandering cells by the lymphatics; and for the words "direct inoculation," etc., enlarge the statement to include the septic absorption of all broken down, disintegrated, and dying epitheloid cells.

This, in our judgment, is as near the facts of the origin and course of cancer as our present knowledge will carry us.

One thing is certain, the pure localist must abandon all belief in heredity, for that is a constitutional tendency, or diathesis.

Many cases of cancer are traceable to a blow, or a wound. They are so frequent that such an influence cannot be overlooked. A delicate woman, predisposed, receives a blow on the breast, and scirrhus follows. On the other hand, thousands of strong women, among the lower classes of the English and Irish, are pounded and kicked in the breast by their husbands, and no cancer follows. We conceive that a diathesis exists comparable to that which predisposes some to joint disease in childhood. The feeble child, predisposed, falls on the hip, and morbus coxæ follows. The strong child rolls down-stairs and dislocates its hip, but no disease of the joint results.

---

[1] The Value and Fallacy of Statistics in the Observation of Disease. Boylston Prize Essay.

As regards the vexed question of operating or not, we commend the calm and moderate statement of Mr. Birkett: "I cannot conclude without urging the expediency of removing the *first* growth of cancer, in *select* cases. I do so upon the firm conviction, based upon experience, that by so acting life may be prolonged; a certain amount of immunity from bodily suffering and mental stress may be ensured; the chance of freedom from all local suffering is given; and that when, unhappily, the recurrence of the disease gives rise to ulceration, the duration of that distressing state is shortened."

Mr. Nunn develops some curious and interesting facts. That the mobility or adhesion of the tumor does not influence the prognosis after operation. He, however, strongly advocates saving the fascia over the pectoralis major muscle intact, when the disease is confined to the mammary gland.

Again, in nineteen per cent. of his cases, the other breast became affected in recurrent disease. He notices, at some length, the very important fact that chronic and obstinate eczema of the nipple results in epithelial cancer, and requires removal of the breast.

"The employment of caustics (in removal of cancer) has been unduly extolled, and as unduly neglected, . . . but to expect a longer immunity from return of the disease, which it is alleged is secured by these means, is to entertain a delusive hope."

He advocates the knife, and lays much stress on a cross cut down through the axillary flap, to ensure drainage. Carbolic antiseptics are moderately praised. Sulphurous acid he thinks highly of as a dressing. Chloride of zinc wash on the wound has not proved certain to destroy the germs of recurrence. Iodoform for ulcerated sores is commended.

The execution of this work is very fine, the type large and elegant, and the paper of excellent quality. Twenty-one colored plates with microscopic sections conclude the book. They are of a superior character. Altogether this monograph is interesting, complete, luxurious. Those who can afford it will be well repaid by purchasing it. It should be included in all public medical libraries. D. W. C.

— "Professor Worth," while feeding his performing snakes at a museum on the Bowery, was recently bitten by a rattlesnake. He soon became unconscious, and was sent to the Chambers Street branch of the New York Hospital, but was discharged cured in a day or two.

— "St. Jacob's Oil" appears to be a feeble and badly made aconite liniment, and it consists mainly of water, ether, alcohol, turpentines, and a small proportion of aconite with red coloring matter. Its whole function is to make money for the enterprising merchants who own it, and in this it is by no means a delusion or a snare. — *Squibbs' Ephemeris of Materia Medica, Pharmacy, etc.*

Medical and Surgical Journal.

THURSDAY, AUGUST 3, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

TENTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE CITY OF BOSTON.

THIS document which, though presented to the city government some time since, has just been circulated, contains much valuable and interesting information both for the local inhabitant and the general sanitarian. The pamphlet is composed, as usual, of the report of the Board as a body, of the individual reports of the city and port physicians, and of the superintendent of health. The report gives ample evidence that the Board and the individual officers are doing a useful work, and discharging their several functions with credit to the city and to themselves.

The report is for the year ending April 30, 1882, and indicates that the sanitary condition of the city has been, all things considered, satisfactory, and satisfactory also, if we content ourselves with a comparison with other large cities, though this we are assured is not the ultimate standard to which the Board would limit itself. There are one or two evils, and among them notably the continued discharge of sewage upon saturated flats and bad drinking water, which militate against the attainment by this city of a higher sanitary condition, but it is no fault of the Board of Health that these evils continue to threaten us.

The vital statistics, presented in tables, from which we make extracts, would, we do not doubt, be more trustworthy, more accurate, and present more reliable data from which to draw conclusions were they under the sole and exclusive charge of the Board. As now existing the sources from which these tables are compiled might certainly be improved, though there are also much less good returns elsewhere.

There has been nothing approaching an epidemic in the city during the past year, and there was a marked falling off in the percentage of deaths arising from preventable causes. The average percentage of deaths from preventable causes for ten years, from 1872 to 1881 inclusive, was 28.40, the percentage of deaths from such causes in 1881 was 26.87. The average death-rate from all causes for the past seventeen years was 23.88, the death-rate for the year 1881 was 22.67. The average percentage of deaths of children under five years of age for the past ten years was 40.75; for 1881 it was 36.75; in 1872 it was 42.17, and the diminution has been gradual and steady. Among the principal causes of the 9016 reported deaths come in the order of their importance, consumption with 1564 victims [17.3 per cent.]; pneumonia, 634 [7.6 per cent.]; diphtheria (?), 601 [6.7 per cent.]; heart disease, 465 [5.1 per cent.]; cholera infantum, 444 [4.9 per cent.].

The number of decedents of American parentage was 2416, and their average age, 30.96; the number of those of foreign parentage was 5109, and their average age 27.82. The greatest number of deaths occurred, as usual, during the third quarter of the year, that is, during the summer months, and the next greatest number during the fourth quarter, than which the first quarter is usually more fatal.

Small-pox has been successfully kept at bay. The experience of the Board in regard to this disease, and the immunity of the city from anything approaching an epidemic are instructive and creditable. The report says: —

"It is now nine years since the subsidence of the epidemic of small-pox which prevailed in this city in the winter of 1872–73. Scattering cases occurred following the epidemic, three or four cases per month, until August, 1873, and from that date to October, 1881, a period of over eight years, only twenty-seven cases and two deaths occurred from this disease in this city. This is the longest period of such exemption from small-pox that the city has ever experienced.

"Early in October last a case, which was contracted in another city, occurred at the South End. It was unrecognized and unreported by the attending physician until many persons had contracted the disease, and they in turn had extended the disease to others. As soon, however, as the cases were discovered effectual measures were taken, and the spread of the disease checked.

"Other cases were from time to time imported from different places, and between October 8th and January 1st thirty-three cases and five deaths occurred.

"In January there were seven cases and two deaths; in February seven cases and two deaths; in March six cases and one death; and in April three cases and one death. The whole number of cases for the financial year, ending April 30th, was sixty-five. Of the sixty-five cases reported thirty-six were males and twenty-nine were females; thirteen were children and fifty-two were adults. There were twelve unvaccinated persons among the number. Five were revaccinated at the time of exposure. In regard to the revaccination of the other cases there was no evidence that they had been successfully revaccinated at any time. Those who were revaccinated at the time of exposure had very mild attacks of the disease. Nine out of the twelve unvaccinated persons died, while only four died out of the fifty-three vaccinated.

"Thus the proportion of deaths is seventy-five per cent. in the unvaccinated, and seven and one half per cent. in the vaccinated."

An excellent photograph, taken by the head nurse of the Small-Pox Hospital, giving the legs of a patient with a severe discrete small-pox, and showing remarkably well the typical umbilicated pustules, accompanies the report. Among the eccentricities of the disease Dr. McCollom, the city physician, mentions a case of variola equina, occurring in a man who had the care of sick horses, and a curious instance of a nursing child who, about two weeks after the vaccination of the mother with bovine virus, developed a general eruption presenting the characteristic appearances of cow-pox, the conditions and circumstances leaving no other explanation than the contraction of the disease through the medium of the mother's milk.

Between October 1st and March 1st 25,340 persons were vaccinated or revaccinated, at a cost of twenty-four and three fourths cents each.

"Of those revaccinated — that is, of those who had been inoculated at least once before, — records were kept in over twenty-eight hundred cases, showing the number of scars in each case. Analyzing them we have the following result: —

"Judging from the number of scars, only five hundred and twenty-seven in every thousand of those applying for revaccination were well protected, including even in this class, those with two scars; while four hundred and seventy-two in every thousand, or nearly one half, were poorly protected.

"Judging from the character of the scars, and admitting two good ones to be sufficient protection, it appears that 360.6 in every thousand were well protected, and 639.4 in every thousand poorly protected.

"Again, looking at this question from the point of time, and assuming that within fifteen years the protective power has diminished sufficiently to require revaccination, we find that four hundred and fifty-four in every thousand had not been vaccinated within this period.

"Allowance, however, must be made for the fact that since the introduction of dried animal virus, and the use of the scarifier instead of the lancet, a scar of large size is often produced, representing a group of vesicles, or so-called compound vesicles. One or two such scars must certainly be equivalent to four or five of the ordinary size, resulting from a single vesicle.

"Examining again our statistics, we find that out of three thousand six hundred and sixty-six cases only one hundred and nineteen had been revaccinated before, or only thirty-two per thousand. One reason for this is, that nearly all applying for public vaccination belong to the laboring class, and, naturally, those of adult age are unwilling to run the risk of losing several days' work, to which they are liable, if the vaccination is successful. Consequently it has been found difficult, for this reason, to induce laboring people, of both sexes, to submit to vaccination, even after being exposed to small-pox."

The Board thinks that, notwithstanding the large number vaccinated during the past winter, it represents only a comparatively small proportion of those still remaining who are in need of vaccination, and suggests whether it would not be for the public good to have every child of fifteen years of age revaccinated on graduation from school; the practical objection to this course it thinks could be overcome, and in this way the rush for vaccination whenever the city is threatened with an epidemic would be avoided with all the ill consequences liable to follow hasty and careless vaccination.

Some interesting details are given as to the sanitary surroundings found where inspections were ordered on account of cases of diphtheria. Of 1706 cases of reported diphtheria 601 were fatal, giving a mortality of thirty-five per cent. Of the houses in which these cases occurred eighty-two per cent. were *found* to be in a defective sanitary condition.

Upon the all important question of sewerage the report rightly lays much stress and says:—

"The sewage of the whole city still continues to be discharged at the eighty-two sewer outlets, settling on the shoals, and polluting the air of not only the entire margin of the city, but to a great distance interior. The Board of Health began eight years ago asking for the relief from this great nuisance, which could be found only in the use of an intercepting sewer.

"This sewer was begun in October, 1877, and has been completed as far as the pumping-station, a point in Dorchester Bay, at a cost of nearly $3,000,000. It will require at least two years more to complete the tunnel under the bay and finish the reservoir at Moon Island, when the entire system can be put in use. Meanwhile immediate and increasing relief could be obtained by pumping a portion of the sewage at once into Dorchester Bay.

"Those portions of the city which would be most relieved by the change are the West End, Back Bay, South End, Roxbury, and South Boston.

"It was ascertained that connections could be made in a few weeks by which four and three quarter million gallons of sewage daily from South Bay, and two and three quarter million gallons daily from Charles River could be taken into the new sewer and pumped into Dorchester Bay. This amount could, in a few months, be increased to 10,000,000 gallons, one half of which now goes into Charles River and the other half into South Bay."

The order of the Aldermen of last March requesting the Board to consider the propriety of discharging sewage into Dorchester Bay, and its report on this question with the names of the authorities consulted during the preparation of the report are given, regret is expressed that the Legislature should have passed a restraining act, and a belief is affirmed that the city, and especially South Boston, will unnecessarily suffer during the next two years in consequence. In all which we heartily concur with the Board of Health.

One hundred and sixty-three school buildings were inspected and forty-five defects in drainage were detected, about twenty-eight per cent. This work should not fall upon the Board of Health; there should be a Sanitary Inspector of Schools.

The report refers to the proposed metropolitan system of sewerage for the Charles and Mystic River Valleys, and endorses the scheme warmly. The Board again expresses its disappointment at the action of the Legislature on this question, and states that the great need which exists to-day will be seriously felt long before it is possible to complete such a piece of work as building the required sewers. Here, again, we are glad to be able to warmly endorse the words of the report.

If space permitted we should be glad to reproduce what is said about the water supply of the city, but for this and some other important subjects we must refer the reader to the pages of the report itself. We should like much to see the Board of Health grapple officially with this vital problem of water supply, in dealing with which the City's Water Board seems helpless.

◆

BAD DRINKING WATER AND POLITICS.

WHEREVER stored water is exposed to such intense heat as must result in shallow reservoirs of surface water, in climates like that of most of the cities of the United States and many parts of Europe, it is liable from time to time to contain the sponge, the decay of which gives rise to the peculiar "cucumber," "oily," or "fishy" taste now and then complained of in Boston. This does not occur in the temperature of London or in such deep, gravelly-bottomed ponds supplied by underground springs as Lake Wenham, for instance, where the heat never rises to the height requisite for the development of that particular form of growth. Naturally, therefore, the liability to the disgusting taste and smell would be increased, as was the case, by damming Lake Cochituate and flowing many acres of meadow land. It does not appear that vegetable or animal filth increases this liability, although there are other objections to the town of Natick using Lake Cochituate as its cess-pool. Professor Farlow's careful researches, — which cleared the way for Professor Remsen's lucky hit in finding the real *causa causans* of this curious taste and smell, have apparently satisfied the Water Board and many of the public, to judge from the sententious advice: "If you don't like the water, drink whiskey," and from the readiness of our citizens to accept what seems to them the inevitable, and purchase their drinking water. It is a fact that we do not yet know how to avoid this nauseous taste; but it is also a fact that it comes only at intervals of several years, lasts only a few days, disappears upon boiling, and is probably not prejudicial to health.

The chief trouble in the Boston water supply at present was predicted by the eminent city engineer whom the politicians drove from Boston, to the great loss of that city, and had already been clearly illustrated in the flooding of the Lake Cochituate meadows years ago. It consists in the simple fact that the Sudbury River reservoirs were built contrary to all principles of science and common sense, that many acres of very shallow water cover turf rotting away slowly, that the conditions for the growth of low forms of aquatic life are produced, that a bottom covered with a nasty mass of filth takes the place of gravel, and, finally, that the citizens are drinking bog water, which is sometimes pretty good and often very bad, just in proportion as it is mixed with greater or less proportions of decent water. It is probable, too, that these conditions of varying heat and nastiness may be something of a factor in the production of the *clathrocystis* and *cœlosphærium* and *anabœna*, which every few years rouse the wrath of the citizens, to be appeased by the Water Board's perennial habit of taking a few chemical analyses, and by the natural disappearance of the plants.

Another clear source of the dirty water observed in our bath-tubs lies in the fact that many of the water mains were laid before the practice of coating the insides with tar was in vogue, and that the roughnesses of the surfaces cause vegetable *débris* to collect and to be unevenly distributed.

It needs no elaborate argument from us to prove that the public health is not sufficiently attended to in that city where only the rich can have pure water to drink, and where the temptation to the poor to drink bad rum is increased. Nor shall we endeavor to show that the public morality is low where important public trusts such as the management of water supplies are made subservient to politics.

Beyond this question as applied to Boston, and partly in connection with it, comes the difficult problem of water and sewerage for the State, which can be properly treated only by general laws. Let us hope that such legislation will not be like that of the Butler-fearing Solons, who allowed the shoemakers of Natick, by special enactment, to bathe in Lake Cochituate rather than lose a few votes.

If we are to become so extravagant in the use of water as to require one hundred gallons daily to each individual, there must be either separate supplies, as in every farm house, for drinking and for other purposes, or else water metres must be introduced, as has already been done in other cities.

MEDICAL NOTES.

— The burning of the Ring Theatre, at Vienna gave rise to many important medico-legal investigations respecting the sex and identity of charred corpses, of which Ed. Hofmann and Schultze give a description (*Wiener Med. Blätter*, 1881, No. 50, page 1538). In determining the sex in cases where the external genitals were completely destroyed, the chief point relied upon was the absence or presence of the uterus and ovaries. In ascertaining the approximate age, external appearances were quite unreliable. The union of the epiphysis with the diaphysis of the humerus, which first takes place at twenty-four years of age; the ossification of the ribs, and more especially the ossification of the larynx, which generally begins between the thirtieth and thirty-fifth year, and is completed in the fortieth year, were found to be the best and most easily ascertained data. In women, the state of the ovaries was important; these being smooth in girls and young women, cicatrized in older women. The hair of the head and beard was generally black, and had to be washed before its natural color could be ascertained. The cornea was generally milky and turbid, as if boiled. Often the obsolescence of the cornea gave to the iris a deceptive blue appearance. The teeth, though calcined and crumbled, were, nevertheless, serviceable in determining the age. The nails, too, in some cases, served for identification. In a large number of cases the blood was of a florid color; and this may have been due to the inhalation of carbonic oxide gas. — *London Med. Record.*

— Martin P. Avery, who for some time past has been exhibited as a "living skeleton" at Bunnell's Museum on Broadway, died on the 16th of July. He was forty-six years of age, and was born in Chenango County, New York, where he was engaged in the grocery business until eight years ago, when his health failed him. He was a man of small stature, being little more than five feet high, and weighed only about one hundred and fifteen pounds when in good health. He complained of dyspeptic symptoms, and the small amount of food he could retain did not seem to be properly assimilated, so that he rapidly lost flesh, and being unable to attend to his usual avocations he finally set up as a "curiosity" in order to gain a livelihood. From the account of the medical man who was called in to attend him, it would seem not to have been a case of true progressive muscular atrophy, but rather of exhaustion from want of nourishment. There was no intestinal digestion whatever, and his physician attributed this to failure of the pancreatic secretion or an entire obliteration of the thoracic duct, or both. No fatty matter was absorbed into the system, and the result was slow starvation. Unfortunately no autopsy was held in the case.

— A valued contributor sends us the following transcription from a tombstone in the Charter Street burying-ground, Salem: —

HERE LYETH BVRIED
$\overset{e}{\text{y}}$ BODY OF
EDWARD MOULD
CHYRURGIAN AGED
58 YEARS DECEASE$^{\text{D}}$
$\overset{e}{\text{y}}$ 5 OF NOUEMBER
J688.

Miscellany.

A CASE OF TRAUMATIC TETANUS.

BY F. B. FULLER, M. D., PAWTUCKET, R. I.

R. M., a somewhat delicate boy, nearly eleven years of age, received a wound in the hand from the explosion of a blank cartridge in a toy pistol, July 5th. The wound seemed insignificant, but after two or three days some swelling and pain occurred in it, and poultices were applied for two or three days.

On the sixth day the wound bled moderately but was not tender or painful.

On the seventh day the boy complained of stiffness of the neck and jaws, which made it somewhat difficult for him to eat his dinner. These symptoms increased, and at seven P. M. I saw him for the first time; no physician had attended the wound.

The boy was found sitting in a noticeably erect position. He could bend his neck and back, but at once resumed the rigidly erect position. His jaws could be separated one inch. Liquids could be swallowed easily, but mastication was difficult. His pulse was 90; temperature normal.

The wound, situated in the palm, at the junction of the second and third fingers, was small. It had an unhealthy appearance, edges ragged, granulations gray and flabby, and a bloody serum escaped on a slight manipulation. It was not tender or painful. The tissues around it were somewhat œdematous. There was no sinus to be found.

Large doses of bromide of potash were given. The boy slept well until four A. M. of the next day, when he awoke with a spasm, in which the tongue was slightly bitten. Opisthotonos was considerable, and the jaws could be separated but one half of an inch.

At seven A. M. his pulse was 120; temperature 98° F.; respiration 22. During the day he steadily grew worse. The jaws remained separable only one half inch. The opisthotonos increased. Pain was complained of in the back. The spasms increased in frequency, and toward the last occurred every few minutes. He remained in a doze between them, but the least disturbance would bring them on.

The pulse increased in frequency and grew feeble. At five P. M. it was 160, and after that it could not be accurately counted. The pupils dilated only during the spasms. There was profuse sweating.

His temperature began to increase at about two P. M., and when he died, at eight P. M., it was 108.1° F. Death seemed to be from exhaustion. He could swallow until a short time before death, and no froth appeared in the mouth.

Wine and chloral hydrate were given in moderately large doses during the earlier part of the day, and at four P. M., at the suggestion of Dr. L. Morton, who saw the patient in consultation, physostigma was administered.

The fluid extract of physostigma, made by H. T. Thayer, Cambridgeport, was the only form in which the drug could be obtained, and that was given subcutaneously three times, at intervals of half an hour, in doses of five minims, ten minims, and twenty minims. No effect was obtained, and its administration was stopped on account of the evident hopelessness of the case.

DEATH UNDER ETHER.

The following account of a case of death under ether, administered by Ormsby's inhaler, was written by Mr. Lawson Tait, of Birmingham, to the *British Medical Journal*: —

"A patient, aged forty-five, was sent to me from Liverpool with a large abdominal tumor, for which she was very anxious to have an operation performed. She was extremely anæmic and feeble, and at first sight it appeared to me perfectly hopeless to attempt anything. Rest and care in the hospital so far improved her that I agreed to her urgent request to attempt either the removal of the tumor, which was clearly uterine, or of the uterine appendages. At nine A. M., on June 26th, she was put under the influence of ether by my assistant, Mr. Raffles Harmar. The ether used was supplied by May and Baker, of London, and is described as 'absolute anhydrous methylated sulphurous ether, .717.' Less than half an ounce was put on the sponge of the inhaler, and the instrument was placed over the patient's face, with the air-valve open. It is difficult, under such circumstances, to give an accurate statement of time and the sequence of events, but I think the air-valve was kept open about three minutes, and was certainly not closed more than two minutes before I noticed that the pulse of the right wrist, which I was observing, was gone. Dr. Burnie, of Nottingham, was observing the pulse of the left wrist, and, in answer to my remark, stated that the pulse could be felt in the wrist on his side. The breathing was perfectly regular and deep. I lifted an eyelid, and saw the peculiarly dilated pupil which I have seen once before, and which meant death. Dr. Burnie now said the pulse was gone, yet breathing was still going on. The inhaler was immediately removed, and the breathing was assisted. It rapidly failed, however, and in spite of the inversion of the patient and the continuation of artificial respiration, we got nothing more from the patient than one groan. Death took place at the heart at least one minute before respiration was interfered with. No incision had been made. Dr. Saundby made a careful post-mortem examination, and reports that the tumor was uterine, and that the chief feature was the remarkably small size of the heart. It weighed only four ounces, and Dr. Saundby says: 'I have never seen so small a heart in an adult.' The right side was filled with clot, and the left side was empty. The muscular tissue of the organ was somewhat granular, but this may have been due, Dr. Saundby thinks, to post-mortem change. The right kidney had some cysts, and there was some puckering of the left. The capsules were a little adherent, and the surfaces smooth, rather pale, and the cortices narrow. Nothing else of note was observed. At the time of the death I regarded it as one of asphyxia, due to the inhaler, and the condition of the heart confirms, it seems to me, this view. Until three weeks before this death I had for years used ether dropped outside a single layer of a towel, spread over the patient's face. I had a strong prejudice against the use of an inhaler, by which the patient breathed over and over again the same volume of ether and air. That such a plan may be safe in the great majority of cases may be true, that it saves both time and ether cannot be denied, but that it will prove unsafe in such an exceptional case as this was, I think, is quite evident. My conclusion is that as no economy of time or ether will compensate for such a disaster, I shall revert to the use of the towel, and certainly shall never again employ any inhaler in which the same fluid is rebreathed."

CORRECTION.

Mr. Editor, — Will you please make the following correction. In the transactions of the Boston Society for Medical Observation, published in the Journal of July 13th, I am reported as relating a case of menstruation, occurring at the age of eighty. What I did say was that the woman died at eighty, at which time her youngest child was fifteen years old. This would make her sixty-five at her last pregnancy, up to which event she was known to have menstruated regularly. Yours truly, Frank Wells.

Boston, *July* 29, 1882.

SCIATICA.

In a clinical lecture on sciatica, Mr. Jonathan Hutchinson[1] says, "In nineteen cases out of twenty in which the diagnosis of 'sciatica' is suggested, there is no affection of the sciatic nerve whatever. They are simply cases of arthritic disease of the hip in one or other of its various forms, acute gout, chronic gout, rheumatic gout, subacute rheumatism, or chronic senile rheumatism. Both by the public and the profession these cases are constantly called 'sciatica.' Our work-house infirmaries are full of chronic cases under that name, and I speak advisedly when I say I feel sure that they are almost all examples of *morbus coxæ senilis*. Of the cases of 'sciatica' which are not hip-joint rheumatism some are probably affections of the fascia or periosteum near to the hip; a minority are possibly affections of the sciatic nerve itself. In these latter it is the sheath of the nerve which becomes painful. The pain may be darting or may radiate, but it does not pass down the nerve-tubules or in any way make the patient conscious of their course. The diagnosis of true sciatica is to be based upon the discovery of tenderness restricted to the trunk of the nerve, and involving a considerable part of its course. Examples of this are decidedly rare, and their recognition without risk of error is a matter of great difficulty.

---

[1] Medical Times and Gazette.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 22, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Whooping-Cough.
New York	1,206,590	1016	638	47.04	5.12	36.49	1.97	2.26
Philadelphia	846,984	495	274	7.67	—	—	3.64	—
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	281	178	45.57	4.98	30.97	3.21	1.42
Boston	362,535	174	83	31.05	5.75	27.03	.57	1.15
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	216	112	41.21	2.32	29.17	4.17	1.85
Cincinnati	255,708	—	—	—	—	—	—	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	80	42	40.00	3.75	34.00	—	—
Pittsburgh	156,381	115	73	49.56	3.47	41.74	.87	2.58
Buffalo	155,137	74	50	46.45	4.05	17.55	4.05	2.70
Milwaukee	115,578	32	16	12.50	9.38	—	6.25	—
Providence	104,857	50	25	32.00	4.00	30.00	—	2.00
New Haven	62,882	39	25	12.82	2.56	2.56	4.13	—
Charleston	49,999	38	18	15.79	2.63	5.26	5.26	2.63
Nashville	43,461	26	13	26.95	3.85	11.55	—	—
Lowell	59,485	26	17	34.65	—	30.80	—	7.68
Worcester	58,295	32	24	71.88	6.25	59.38	—	6.25
Cambridge	52,740	16	8	12.50	18.75	6.25	6.25	—
Fall River	49,006	31	19	38.70	—	25.80	6.45	—
Lawrence	39,178	14	7	35.70	7.14	28.56	—	—
Lynn	38,284	13	4	22.07	7.69	7.69	—	—
Springfield	33,340	10	3	30.00	—	20.00	—	—
Salem	27,598	6	4	33.33	—	16.66	—	16.66
New Bedford	26,875	7	2	14.28	—	—	—	—
Somerville	24,985	7	3	—	—	—	—	—
Holyoke	21,851	22	17	77.27	—	77.27	—	—
Chelsea	21,785	14	8	7.14	—	—	—	—
Taunton	21,213	3	1	—	—	—	—	—
Gloucester	19,329	5	2	—	—	—	—	—
Haverhill	18,475	6	1	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	3	1	3.33	—	—	3.33	—
Newburyport	13,537	1	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	6	4	16.66	—	16.66	—	—
Twenty-one Massachusetts towns	158,765	37	11	18.91	8.40	2.70	8.40	—

Deaths reported 2895 (no reports from Brooklyn, St. Louis, Cincinnati, and New Orleans): 1683 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1028, consumption 303, lung diseases 108, diarrhœal diseases 741, diphtheria and croup 72, whooping-cough 44, scarlet fever 38, measles 33, typhoid fever 32, cerebro-spinal meningitis 24, malarial fevers 20, small-pox 14, puerperal fever 10. From *scarlet fever*, New York 16, Philadelphia six, Chicago five, Buffalo three, Lynn two, Boston, Baltimore, District of Columbia, New Haven, Worcester, and Springfield one each. From *measles*, New York 19, Chicago five, Baltimore four, Pittsburgh two, Philadelphia, Buffalo, and Worcester one each. From *typhoid fever*, New York and Philadelphia seven each, Chicago, District of Columbia, and Pittsburgh three each, Boston and Baltimore two each, Nashville, Fall River, Lawrence, Springfield, and Chelsea one each. From *cerebro-spinal meningitis*, New York eight, Chicago three, Buffalo and Milwaukee two each, Philadelphia, Baltimore, Lowell, Worcester, Fall River, New Bedford, and Chicopee each one. From *malarial fever*, New York 14, Baltimore two, Chicago, New Haven, Charleston, and Nashville one each. From *small-pox*, Chicago six, Philadelphia four, Baltimore three, Buffalo one. From *puerperal fever*, Chicago five, Buffalo two, Philadelphia, Boston, and Chicopee one each.

Thirty-three cases of small-pox were reported in Baltimore, Buffalo two, Pittsburgh one; typhoid fever 10, scarlet fever five, diphtheria six, in Boston; diphtheria five and scarlet fever five, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,072,901 (population of the State 1,783,086), the total death-rate for the week was 21,— against 19.87 and 16.61 for the previous two weeks.

For the week ending July 1st, in 173 German cities and towns, with an estimated population of 8,509,488, the death-rate was 25.5. Deaths reported 4167: under five 2233; pulmonary consumption 511, acute diseases of the respiratory organs 381, diarrhœal diseases 250, diphtheria and croup 160, scarlet fever 76, measles and rötheln 51, typhoid fever 46, puerperal fever 20, small-pox (Königsberg, Stargard, Memel, Eisleben, and Essen one each) five, typhus fever (Posen two) two. The death-rates ranged from 8.1 in Kiel to 39.5 in Chemnitz; Königsberg 33.7; Breslau 32; Munich 23.1; Dresden 29.1; Berlin 28.6; Leipzig 24.7; Hamburg 20.1; Cologne 29.4; Frankfort a. M. 20.1.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending July 8th, the death-rate was 18.4. Deaths reported 2984: acute diseases of the respiratory organs (London) 173, diarrhœa 140, whooping-cough 125, measles 69, scarlet fever 63, fever 39, diphtheria 20, small-pox (London six) 14. The death-rates ranged from 13.5 in Norwich to 24.8 in Nottingham; Bristol 15.1; London 17.3; Portsmouth 18.1; Wolverhampton 19. —; Leicester 20.2; Liverpool 21.5; Manchester 23.2. In Edinburgh 20.2; Glasgow 22.3; Dublin 20.5.

For the week ending July 8th, in the Swiss towns, population 494,390, there were 24 deaths from consumption, acute diseases of the respiratory organs 16, diarrhœal diseases 18, diphtheria and croup nine, scarlet fever six, whooping-cough two, puerperal fever one. The death-rates were, at Geneva 10.3; Zurich 12.2; Basle 23; Berne 23.

The meteorological record for the week ending July 22d, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1882.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 16	30.296	71	85	63	70	47	61	59	Calm	E	SW	0	8	10	C	F	C	—	—
Mon., 17	30.213	72	83	59	51	39	78	56	SW	S	SW	3	8	6	C	F	C	—	—
Tues., 18	30.033	72	81	64	84	54	90	76	SW	S	SW	4	8	4	O	O	T	—	—
Wed., 19	29.916	72	83	67	93	76	92	87	S	S	W	4	3	6	R	T	C	—	—
Thurs., 20	29.962	75	88	66	100	43	68	70	SW	SW	W	2	12	3	G	O	C	—	—
Fri., 21	30.096	73	84	63	57	39	59	52	W	SW	W	1	4	4	F	F	C	—	—
Sat., 22	30.121	71	82	64	65	38	63	55	W	W	W	4	9	11	O	O	C	—	—
Means, the week.	30.091	72	88	59				65										5.00	1.68

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

C. C. HOLMES, M. D. OBITUARY.

Died, at his home in Milton, July 16, 1882, after an illness of six months, Dr. Christopher C. Holmes.

Dr. Holmes was born in Kingston, Mass., September 14, 1817, was graduated from Harvard College in the class of 1837, studied medicine in the Harvard Medical School, and, after one year's service as house surgeon at the Massachusetts General Hospital, settled in Milton, where he remained until his death, a period of forty-one years. His life was one of hard work, his daily business calling him to all parts of Milton, Dorchester, Quincy, and Canton. Although devoted to his profession, he was active as a citizen in all things relating to the public good. During the late civil war he was, as commander of the Cadets, busy in the service of his country. A man of refined tastes, of high social qualities, and with an unselfish heart, his presence was always as a ray of sunshine, whether in the sick-room or in the circle of his friends. In his days of sickness, as in those of health, his care was for others rather than for himself. He will be remembered by his townsmen and by his professional brethren as the kind and judicious physician and the whole-souled Christian gentleman. Those who knew him best will feel his loss the most keenly. C.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 22, 1882, TO JULY 28, 1882.

Elbrey, F. W., captain and assistant surgeon. Granted leave of absence for six months on surgeon's certificate of disability. S. O. 168, A. G. O., July 21, 1882.

Raymond, H. I., first lieutenant and assistant surgeon. To proceed at once, with necessary attendants, from Whipple Barracks, via Fort Verde, to the scene of recent engagements with hostile Indians near General's Spring and bring in those wounded to Fort Verde, and remain in charge of post hospital there until further orders. S. O. 112, Department of Arizona, July 19, 1882.

Carvallo, Carlos, captain and assistant surgeon. Died near Boston, Mass., on July 23, 1882.

Books and Pamphlets Received. — A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine. By Otis Frederick Manson, M. D., Professor of Physiology and Pathology in the Medical College of Virginia. Philadelphia: J. B. Lippincott & Co. 1882.

Lectures.

CLINICAL LECTURE.[1]

DELIVERED AT BELLEVUE HOSPITAL, NEW YORK.

BY AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine and Clinical Medicine in Bellevue Hospital Medical College.

OBSTRUCTIVE JAUNDICE.

Gentlemen, — I propose to direct your attention to-day chiefly to the important subject of organic murmurs of the heart, but before we enter upon this study I wish to show you the patient who came before us one week ago to-day suffering from acute jaundice. The condition of the young man has now very much improved, and yet, as you perceive, the coloring matter of the bile has by no means left the skin and conjunctiva, but nevertheless he is practically well, and will shortly leave the hospital. The fæcal evacuations show the presence of bile in sufficient quantity, and in the urine there is but little of it left, so that we conclude that the obstruction which caused the difficulty has now been removed. Why, then, you may ask, does this discoloration of the skin and eyes still remain? This is because bilondin, the substance which produces the yellow color, has been deposited in the tissues. What little there may be of it in the blood is simply that which is taken up by the blood from the tissues. We find, then, a certain amount of discoloration continuing, but the process of elimination will go on, and in the course of a week or ten days it will have entirely disappeared. Before dismissing the patient I may remark that after he was before the class last week a good substantial blister was applied, and that this is usually an excellent remedial measure in such cases.

ORGANIC MURMURS OF THE HEART.

I proceed now to the subject proper of my remarks to-day, and I will say in the outset that I assume that many of you have already given considerable attention to the study of endo-cardial murmurs; but although this is the case, I think it will be of service to you to go over the ground again, since it is important that you should have this knowledge so readily at command that you can bring it to bear in a practical way at any moment. No apology is necessary, therefore, for introducing this subject.

The most important endo-cardial murmurs which we meet with are in connection with the left side of the heart, those of the right side being so comparatively rare that they are of much less practical significance. The murmurs which we will study to-day are four in number, two in connection with the mitral valve, and two in connection with the aortic. The first murmur to which I direct your attention is the mitral direct or obstructive. It is also called the mitral systolic from the time at which it is heard. The second murmur is called the mitral regurgitant, and signifies, as the name denotes, insufficiency of the mitral valve and consequent regurgitation from the left ventricle into the left auricle. The first murmur in connection with the aortic valve is the aortic direct. It may imply an obstruction, or if not this a certain amount of roughness of the surface over which the blood passes. The second murmur is the aortic regurgitant, which involves of necessity insufficiency of the aortic valves with resulting regurgitation from the aorta into the left ventricle. It is a matter of importance, I hardly need say, that all should acquire the ability to recognize each of these murmurs when occurring alone, and also when in combination. All four of them may be met with in the same individual, and we should be able in such a case to differentiate the several murmurs. This knowledge involves, in addition, a recognition of what these different murmurs denote.

In the first place, then, how are we to distinguish the several murmurs, singly or in combination? By way of preface I may remark that every adventitious sound about the heart is called a murmur, the word murmur being always used in this connection in a conventional and technical sense. The regular heart sounds themselves, although certain modifications are noted in them also, are entirely distinct from these. These murmurs, as sounds, present differences among themselves. Thus they may be either loud or faint, soft or rough. They are said to be soft when they sound like a current of air passing from a bellows. When they have not this bellows-like character they are called *rough*, and if the roughness is quite marked they are sometimes designated as *rasping*. Again they are sometimes characterized by a distinct musical note. There are, then, three kinds of murmurs as regards the matter of sound, soft, rough, and musical. The sound of the murmur, however, gives us no information as to its origin. Any one of the four murmurs pointed out may partake of either of these characteristics. Let us proceed, then, to inquire by what points we may recognize the several murmurs, and differentiate them when they are found in combination.

This inquiry can be best answered, I think, by a reference to the case of the woman whom I now bring before you. In commencing an examination of the patient, I will call your attention first to the marked pulsation noticeable in the arteries of the neck. This sign, I may say, in passing, indicates, as a rule, aortic regurgitation, but we need not, of course, base our diagnosis on this alone. In auscultation of the heart the stethoscope is better than the unaided ear, as it serves to localize the sounds more satisfactorily. Now placing the stethoscope at the second intercostal space on the right side of the chest, but quite near the sternum, I get a distinct rough murmur. My first inquiry in connection with it is, With which of the two heart sounds does it occur? I find that it is connected with the first sound, and it is therefore a systolic murmur. Suppose, now, that I had some difficulty in determining the heart sounds, which might occur, for instance, with great rapidity and irregularity of action. In that case I might place my finger over the carotid artery while listening to the heart, which would give me the desired information, since the carotid pulsation corresponds with the first sound of the heart. Or I might place my hand over the apex of the heart, and if I could then connect the murmur with the heart impulse, which is synchronous with the first sound, I would know that it was systolic. On further auscultation I find that this murmur cannot be heard much below the base of the heart, but when I carry the stethoscope up to the neck I get a murmur which corresponds exactly to that heard at the second intercostal space. We have, then, a rough murmur at the base of the heart, which is systolic, and which is propagated to the carotid artery. The diagnosis, therefore, is a direct aortic murmur, due either to obstruction or to roughening about the aortic orifice. It is possible, however, that this may be an inorganic murmur, due to some abnormal condition of the blood, but as we shall not have time on the present occasion to enter into a discussion of the question, we will assume that it is organic in character.

---

[1] Reported for the Journal.

While listening to the heart in this same situation I recognize a second murmur, which I can very readily distinguish from the other because it follows the latter, and that not continuously. There is a little break between the two, and I find no difficulty in determining that this last murmur is coincident with the second sound of the heart. If, as is sometimes the case, the second sound could not be made out, the interval would be sufficient to indicate that it occurred at the time when the second sound was to be expected. I find, furthermore, that the murmur is propagated almost down to the apex, which shows that it is due to an insufficiency of the aortic valve. If the valve is sufficient or adequate, as we say, there can, of course, be no regurgitation, but if there is regurgitation the blood in thus flowing back always give rise to a murmur, unless, indeed, the action of the heart is exceedingly feeble. The question now arises, Does the intensity and quality of the murmur give any intimation as to the amount of regurgitation? Experience shows that the answer is a negative one, and this is a practical point of considerable importance, since we should naturally infer that if the murmur was loud there would be a large amount of regurgitation. The reverse of this is perhaps more apt to be true, but there is really no definite rule about the matter. We have, then, two distinct murmurs which succeed each other, to and fro, like the ordinary sounds of the heart. There is one point to guard against when two murmurs exist in this way, and that is the danger of mistaking them for a pericardial friction murmur.

I next go down to the apex, wherever that may be. The rule is that the point where the lowest appreciable impulse is found is the location of the apex; although it is often the case that we get a stronger impulse at other points than this when the heart is enlarged and the shape of the organ altered. One reason for this is that as the heart enlarges it pushes away the lung, and so comes nearer to the chest wall. You must bear in mind, however, that the lowest point of impulse is always the apex, whether it is in the normal position for the apex or not. As you are aware, we listen at the apex for mitral murmurs, and now placing the stethoscope at the apex in this case, I find a murmur which occurs just before the first sound of the heart. There is no difficulty in determining its relation to the first sound, since the latter is always synchronous with the impulse. This murmur is short, rough in character, and can be heard only over a very circumscribed space. It is worth while to note also that it ends abruptly with the first sound of the heart. From these points I know that I have here a mitral direct, obstructive, or presystolic murmur. This is a murmur which precedes the first sound of the heart, and is usually rough; the roughness being of a peculiar quality, which is described as vibratory. This vibratory character is due to the causes of the murmur, which we have not time to investigate minutely at present. I can only allude in passing to the fact that there are usually adhesions, which produce certain changes about the orifice.

Moreover, while listening to the apex I get still another murmur. This one begins with the first sound of the heart, and is of a soft and blowing character, so that it is readily differentiated from the other. An additional characteristic of it, in contradistinction to the latter, is that it is propagated laterally around the chest as far as the scapula. From these points we diagnosticate a mitral regurgitant murmur, so that we find all four of the murmurs which I have mentioned present in this patient. Here, as before, the loudness and quality of the regurgitant murmur affords no indication of the amount of the valvular insufficiency.

There is one point to which I will now call your special attention. Please to mark that two of the four murmurs occur synchronously, the aortic direct and the mitral regurgitant, which are heard with the first sound of the heart; while one, the aortic regurgitant, is diastolic, and one, the mitral direct, is presystolic. Given a systolic murmur, and if it is an aortic regurgitant, it will be heard with the greatest intensity at the base of the heart and propagated to a very slight extent below this point. On the other hand, if the systolic murmur be a mitral regurgitant, the greatest intensity is found at the apex, and propagated laterally to the back of the chest. In case both these murmurs exist, as in the present instance, we shall find the characteristics of each. One is rough and the other soft, while each has its special location and direction of propagation. To determine the distinct presence of both we may carry the stethoscope gradually from apex to base, or *vice versâ*, when we shall arrive at a point where one murmur ceases to be heard; while if we proceed further the other will presently commence to appear. On this occasion I will not go into the question whether there is enlargement of the heart in this patient, or, if so, whether its character is of the nature of hypertrophy or dilatation, or of both, as is more apt to be the case.

There are some points of interest in connection with the history of the case to which I will now direct your attention. The patient is a native of Ireland, twenty-eight years of age, and she is an embroiderer by occupation. She was admitted to the hospital two days since. Ten years ago she had a severe attack of acute articular rheumatism (the first in her life, as far as we are able to ascertain), and since then the attack has been repeated regularly every spring, although with diminished intensity. About five years ago she began to suffer from palpitation, and more recently from dyspepsia, which has increased very much during the past year. Her feet have been swollen at times, and she has also suffered from dimness of vision. Her urine is now of a specific gravity of 1010, and contains no albumen. Of course, it is impossible to say with which of the attacks of rheumatism she had endocarditis. This certainly occurred with one of them, and may possibly have done so with all. As this complication is most apt to occur with a severe attack it is probable that she had it with the first. Another thing that renders this probable is that the symptoms of which she now complains commenced five years ago, and, as a rule, endocarditis does not produce these symptoms of distress until several years have elapsed. A few words now as to the subsequent history of the case. Although the patient has the four heart-murmurs, I think the reason that she is suffering more than usual at present is because her general health is run down to a considerable extent. Perhaps there is no condition in which the system is so tolerant (if otherwise in good condition) as organic disease of the heart; and I think that after this woman has enjoyed a season of rest, with the best nourishment and appropriate tonics, she will feel wonderfully better in every way. This is an important practical point, but I cannot enlarge upon it at present.

Our next patient, a man in advanced life, as you see, has another serious trouble besides that of the heart, namely, locomotor ataxia; but I do not propose to discuss the latter on this occasion. I believe, if I remember rightly, that he has all the four murmurs also. On applying the stethoscope to the second intercostal space, a little to the right of the sternum, I find, as before, two murmurs, one with the first, and one with the second, sound of the heart. He has, therefore, both aortic obstruction and regurgitation. Again, at the apex there are the same two murmurs as in the other patient; so that here is a second instance of all the four murmurs existing in combination. I will call your attention in passing to the fact that notwithstanding he has all these murmurs the patient suffers very little from the condition of the heart. What gives him all his trouble is the locomotor ataxia.

CHRONIC SYPHILITIC LARYNGITIS.

In presenting now a third patient I will pass briefly to another subject. This man, in middle life, has, as you notice when he replies to my questions, a difficulty in speech. He speaks, you will observe, with decided effort, and his voice has a rough and stridulous sound. If we exclude the effect upon the laryngeal muscles of pressure upon the recurrent laryngeal nerve by a tumor (almost invariably aneurismal in character), there can be no doubt that he is suffering from chronic laryngitis, the trouble having lasted for about seven months. There is not aphonia here, but dysphonia, as the man speaks with evident difficulty and the voice is impaired, but not lost. A patient with aphonia may or may not have chronic laryngitis, and there is a practical test for determining in any given case whether it is a paralytic aphonia or one due to chronic laryngitis. If it is to the latter the patient speaks with a visible effort, as in the present instance, but if due to paralysis there is no visible effort. Of course, the laryngoscope shows at once whether there is an inflammatory condition present or not; but we may be so situated that this means of diagnosis is not available. A chronic laryngitis in by far the greater majority of instances is either tubercular or syphilitic in character. If it is tubercular there is almost invariably pulmonary tuberculosis also. It is still a disputed question, I may say, whether there is any exception to this rule. In the present case the patient has no trouble in his lungs, and, in addition, he confesses to having had syphilis. There are, as a rule, some differences to the eye between tubercular and syphilitic laryngitis, but these differences are not, I believe, entirely reliable. When this patient came into the hospital there was so much obstruction in the larynx that it was thought that it would be necessary to resort to tracheotomy; but he has improved in a very marked degree, and there is no longer any occasion for such a procedure. In this connection I may add that it is only in syphilitic laryngitis that there is apt to be such obstruction as to necessitate the performance of tracheotomy.

Original Articles.

REPORT OF THREE CASES OF ABSCESS OF THE BRAIN.[1]

BY J. T. ESKRIDGE, M. D.,

Physician to the Howard and St. Mary's Hospitals.

ABSCESS of the brain is of sufficiently frequent occurrence to make the subject of interest to the general practitioner. The cases reported in this paper are all the more interesting because each, due to a different cause, was associated with dissimilar diseases.

The first case was associated with cancer in several of the other organs of the body; the second, with chronic meningitis; the third, with apparent facial erysipelas and pneumonia followed by acute meningitis.

Detailed cases of brain lesions lose half of their interest, and become almost valueless to students of cerebral localization, when unattended by accurate descriptions of the relations of pathological lesions to ganglia, fissures, and convolutions.

I wish to acknowledge the services of my friend Dr. Charles K. Mills, who took an active part in the post-mortem examination of Case I., and rendered me valuable assistance in accurately locating the lesions in the first two cases.

CASE I. *Two Abscesses of the Brain.* (1.) The larger one, involving the centrum ovale of the postero-frontal and parietal lobes, deeper portions of the gray matter of the anterior parietal convolution, and superior parietal lobule. (2.) The smaller, the anterior two thirds of the lenticular nucleus, and the adjoining portions of the external capsule and claustrum.

September 8, 1881. Mrs. D., aged fifty-four, born in Germany of a family several of whose members had died from cancer, had been a sufferer from headache fourteen years. She had a large frame, and carried considerable fat. Excepting the head trouble, she had enjoyed excellent health until two years before, when she noticed a small tumor involving the left mammary gland. This proved to be cancerous, grew gradually, and was removed by a surgeon one year after its first appearance. There had been no return of the growth, although some pain had been complained of in the region from which it had been excised.

Her head pain had greatly increased in severity during the last few months.

In the early part of July, 1881, the left arm began to feel weak, and ten or twelve days later the left leg was similarly affected, but to a less extent. About this time she went to the country for her health. Continuing to grow worse, she returned home during August, three weeks before I first saw her, and was able to walk from the street cars to her house, a few hundred yards distant. She was then treated by a homœopathic physician for a few weeks, when I was called in, and made the following notes: —

The left leg was almost completely paralyzed, the muscles feeling soft and flabby. The left arm was entirely paralyzed. The muscles of the left side of the face were slightly paretic. The right pupil was normal in size, left slightly dilated, and responded imperfectly to light. There was no paralysis of the muscles of the tongue, palate, or pharynx. The tongue was slowly protruded in the median line, but when it was held in this position a few seconds it became tremulous, a vibratory tremor taking place in individual muscular fibres. Muscular power was impaired in the right arm and leg, but coördination was perfect. She had had no convulsions, and there was no muscular twitching.

---

[1] Read before the College of Physicians, Philadelphia, May 3, 1882.

With the exception of a slight tendency to drooping of the upper lid of the left eye, the ocular muscles seemed to be acting well and in harmony.

Sensation was unimpaired on both sides of the body.

Special Senses. Vision was equal in each eye, and she read Snellen No. 8, held at about fourteen inches. The ophthalmoscope revealed nothing beyond a slight haziness of the right retina. Taste, smell, and hearing were nearly normal, being well preserved for a woman of her age. Speech was unaffected.

The tongue was moist and slightly coated, appetite poor, bowels constipated, not having been opened for several days. The urine was high colored, specific gravity 1025, but free from albumen. The bladder was tolerant and acted voluntarily.

She was restless, did not sleep well, and complained bitterly of pain in her head. The pain was usually dull. Its seats of intensity were at the top of the head and above each temple, being worse on the right side. She was intelligent, her mind was clear, but being under the impression that her cancer would return, she worried, had become emotional and imaginative.

Temperature (left axillary) 99° F.; pulse 76, full, soft, and regular; respirations 24 per minute.

September 10th, two days later, during my absence from the city, she was seen for me by Dr. Mills, who reported her to be about in the same condition.

September 12th. She was not so intelligent, worried more, and refused to eat. The feet were extended and inverted, the balls of the great toes lying in contact with each other. The internal and posterior muscles of the legs were so firmly contracted that it required considerable force on the part of the attendant to evert and flex the feet, and the effort gave her decided pain. The muscles of the left side of the face were almost completely paralyzed. Swallowing solid or semi-solid substances was so difficult that she refused to eat.

Temperature, right axilla 96° F.; left axilla 99.4° F.; right elbow 95.5° F.; left elbow 96.7° F. Pulse 86; respirations 26 per minute. Respiration was largely of the abdominal type. After taking citrate of magnesium her bowels were opened once yesterday, being the first time in about a week.

September 13th. At eleven A. M., the temperature of the room being 80° F., after ascertaining her body heat, as indicated in each axilla, I made observations on her cerebral temperature, applying the thermometer to most of the stations used by Broca, Gray, and later, by Mills. On the present occasion the surface temperature of the head was taken at eight different stations, on a subsequent one, at two, and still later, at eleven. Hick's surface thermometer was employed and allowed to remain in place ten minutes. On each occasion the temperature of the room was ascertained, and that of each axilla noted. The observations were made by myself between the hours of eleven A. M. and two P. M. The selected stations were as follows: (1.) A middle frontal station in the centre of the forehead. (2.) A right anterior frontal station, over the right eye, an inch and a half above the brow and the same distance from the median line of the forehead. (3.) A left anterior frontal station, similarly located on the left side. (4.) A right posterior frontal station, near the external angular process of the frontal bone. (5.) A left posterior frontal station, corresponding in position on the left side to that on the right. (6.) A right parietal station, just above the right ear. (7.) A left parietal station, just above the left ear. (8.) A right Rolandic station, situated on or near a line drawn over the top of the head from the right to the left auditory meatus, and from two to three inches above the top of the right ear. (9.) A left Rolandic station situated similarly to that on the right. (10.) A right occipital station, one and a half inches to the right of the centre of the occipital region. (11.) A left occipital station, one and a half inches to the left of the centre of the occipital region.

I shall now give the temperature records in connection with the history of the case, and further details under the head of remarks.

Temperature in right axilla 97.9° F.; in left axilla 98.4° F. Pulse 104, weak, and unsteady; respirations 24 per minute.

SURFACE TEMPERATURE OF THE HEAD.

Right side.		*Left side.*	
Anterior frontal station....	97.8° F.	Anterior frontal station....	97.7° F.
Posterior frontal station....	97.8° F.	Posterior frontal station....	98.1° F.
Parietal station............	97.1° F.	Parietal station............	97.9° F.
Rolandic station...........	96 8° F.	Rolandic station...........	96.8° F.

She was unable to void her urine for the first time to-day. Thirty-two ounces were drawn off by the catheter. From this time to the date of her death, just two months later, the catheter was daily required to relieve the bladder. She had not eaten anything for two days. Headache was excruciating. One half of a grain of morphia was required each night to produce sleep, bromide of potassium making her wild and delirious. During the latter part of the day she frequently talked incoherently.

September 15th. The temperature of the left Rolandic station was 5.5° higher than that of the right. The intermitting character of the respiration formed a very interesting feature of the case at this time. There was no gradual rise and fall of the respiratory movements, as seen in the typical Cheyne-Stokes' respiration. There were twenty-eight shallow respirations per minute. After four or five short and rapid respirations there was an interval of rest of eight or ten seconds; then, after about the same number of respirations, came another interval of rest. During the next week the pain in the head became more intense, and localized in the top of the head and right temple. The bowels failed to respond to various purgatives and enemata.

September 22d. The muscles of the left side of the face showed but little loss of power. The pupils were of equal size. The left leg, as well as the left arm, was now entirely paralyzed. The muscular strength on the right side did not fail faster than is usual in one whose general vitality is being lowered.

The conjunctiva of the right eye was congested and watery, the sight being but little impaired.

Temperature, right axilla 97.6° F.; left axilla 98.2° F.; pulse 68; respirations 12 per minute. Respiration was still of the abdominal type. The movements of the abdomen preceded those of the chest, and formed with them a see-saw like, or to-and-fro, motion, the chest apparently not expanding until the end of inspiration and beginning of expiration.

September 23d. Temperature of room 82° F.; of right axilla 98.9° F.; left axilla 98.2° F.; pulse 72; respirations 9 per minute.

SURFACE TEMPERATURE OF THE HEAD.

Anterior central station, 96.8° F.

Right side.		*Left side.*	
Anterior frontal station	95.9° F.	Anterior frontal station	96.2° F.
Posterior frontal station	95.6° F.	Posterior frontal station	97.6° F.
Parietal station	97.6° F.	Parietal station	98.1° F.
Rolandic station	97.0° F.	Rolandic station	96.8° F.
Occipital station	96.9° F.	Occipital station	98.2° F.

The pulse, although only 72 per minute, was very weak, but regular in time and volume. The intermitting character of the respiration was more marked on this than on the preceding day. Three or four respiratory movements were followed by an interval of rest, lasting from twelve to fifteen seconds. The number of respirations did not exceed four in succession, nor were they, at any time, less than three. The interval, or rest, was not longer than eighteen seconds, nor was it less than twelve. The respirations, which were largely abdominal, had to be counted for two minutes to obtain the average number per minute. If the movements of respiration were looked for at the beginning of an interval, none were seen during the first quarter or third of the minute, and only three or four during the second quarter or third; whereas, during the latter part of the minute, there might be eight, six, or only three respirations. Thus: —

Inter.	Res.	Int,	Res.	Int.	Res.	Int.	Res.	Int.	Res.	Res.
	4		4		4		4		4 =	20
15s.	9s.	15s.	9s.	15s.	9s.	15s.	9s.	15s.	92. =	120s.

It will be seen by observing the above tabular view that, if the respirations had been counted during one minute only, eight might represent the breathing frequency per minute; and if those paroxysms of respiration, if I may so term them, had been limited to three respiratory movements each, as they sometimes were, six instead, of ten, of the tabulated form, could have been set down as the number of respirations. This character of breathing, sometimes slightly increasing in frequency, continued until a few days before her death, when it changed to the so-called Cheyne-Stokes respiration.

Sighing rarely occurred. The pupils were normal. The bowels had not been opened since the 11th instant, notwithstanding various purgatives and enemata had been given. Croton oil had been given by the mouth until it had produced griping pains and an emesis of glary mucous, yet it seemed to have no effect on the bowels. The patient lived from the 11th of September to the 13th of November without having an evacuation from the bowels. During this period of two months and two days, or about nine weeks, she neither suffered from nausea, vomiting, nor distension of the bowels from gas or fæces. Her diet for more than two months just preceding her death was almost exclusively of a liquid nature, she rarely taking any semi-solid food.

September 28th. During the last few days the face had been turned to the right, and the head drawn toward the right shoulder. At this time she complained of great pain and soreness in the right and posterior portions of the neck. The parts were hard, swollen, and painful to the touch. An attempt, on my part, to straighten the neck greatly augmented her suffering. Pain was also complained of in the right eye and ear. The former was inflamed, and almost useless as a visual organ, and from the latter there was a constant discharge of yellow pus. The ocular inflammation involved more especially the conjunctiva and cornea. An ophthalmoscopic examination of the right eye was unsatisfactory on account of the hazy condition of the cornea and the uncontrollable movements of the eyes. The watch was not heard by the right ear except on firm pressure.

October 3d. She was blind in the right eye, and deaf in the right ear. The discharges from the eye and ear continued.

October 13th. She remained quiet during the day, but required two grains of morphia to induce sleep at night. The hearing in the left ear varied; at times she heard tolerably well with this ear, and at others she was almost deaf. No improvement in the right eye and ear. A semi-choked disk appearance was noticed in the left eye, and vision was nearly gone. The left eye showed no evidence of external inflammation. No discharge was noticed from the left ear.

November 11th, five P. M. Temperature, right axilla 95.5° F.; left axilla 98.2° F.; pulse 104; respirations 28 per minute. The right side of the body felt quite cool. The breathing had changed from an intermitting to an irregular character, and constituted what is known as the Cheyne-Stokes's respiration, except that there was no lull, during which the hand could not detect feeble movements of the thoracic wall. The respiratory movements gradually became shorter until they were almost imperceptible, then they gradually lengthened until a full inspiration was taken with considerable effort, followed by a blowing noise. Every paroxysm, or rise and fall of the respiratory acts, included about eighteen respirations. She neither saw nor heard, and was no longer able to speak or swallow. The saliva was wiped from the mouth by the attendant, or she made an awkward and ineffectual effort to do it herself, showing that she was probably not entirely unconscious. Her urine was passed involuntarily. No morphia had been required during the last few days. The neck remained in about the same condition that it was on September 23d. The muscles of the left side of the face were paralyzed, the mouth being drawn well over to the right side.

She died, exhausted, November 13, 1881, at 12.30 P. M.

Post-mortem examination was made three hours after death by Drs. Mills, Bissey, and myself.

Brain. The venous sinuses and arteries were carefully examined, but were found to present nothing abnormal. No lesion of the membranes was discovered. The pia mater was unusually transparent (almost bloodless). The optic nerves were normal in appearance, and no perceptible lesion was detected in the other cranial nerves. No effusion. Entire surface of brain examined through the transparent pia mater before its removal, and no pathological condition was discoverable. On stripping the pia mater from the right hemisphere the external surface of the convolutions was still found to be intact. Before completing the process of removal of the pia mater from the right hemisphere a large quantity of a dirty grayish-white liquid suddenly escaped through a small opening at the bottom of a secondary fissure just in front of the upper extremity of the fissure of Rolando.

The right lateral ventricle was laid open by an incision through the lateral border of the corpus callosum. The surfaces of the intra-ventricular ganglia were healthy in appearance. The floors and roofs of the cornua showed no lesion. A longitudinal incision was made through the middle of the head of the caudate nucleus and the optic thalamus, deep enough to pass through these bodies and the lenticular body, just to the inner margin of the insular and sphenoidal cortical substance (gray matter). This incision (Fig. 1) exposed a small, isolated abscess, about one inch in length, three quarters in depth, and one third of an inch in width, involving the following parts from before backwards: the anterior two fifths of the lenticular nucleus, and the adjoining portions of the external capsule and claustrum. The caudate nucleus, optic thalamus, and the entire internal capsule (Fig. 2) were not changed in appearance. The posterior three fifths of the lenticular nucleus and a very narrow strip of its anterior two fifths above the abscess were intact. Vertico-transverse sections through the pre-frontal and occipital regions showed no lesions. Further transverse sections revealed a nodulated mass and large abscess of the centrum ovale of the postero-frontal and parietal lobes.

Fig. 1.

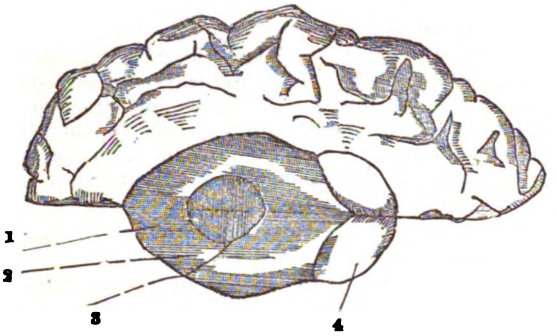


Fig. 1. Abscess (shaded) in the right lenticular nucleus, as seen by a longitudinal incision. 1. Caudate nucleus. 2. Internal capsule. 3. Lenticular nucleus. 4. Optic thalamus.

Fig. 2.

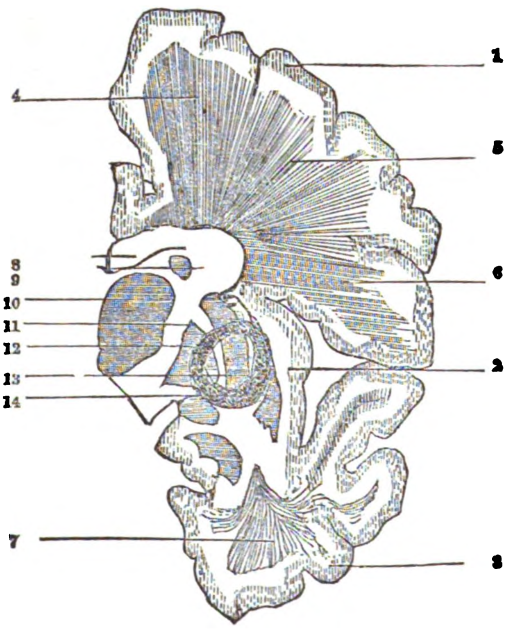


Fig. 2 (from Ferrier). Abscess (shaded) as seen by a vertical transverse section (frontal). Frontal section. 1. Ascending frontal convolution. 2. Insular lobule. 3. Sphenoidal lobe. 4, 5, 6. Superior, middle, and inferior frontal fasciculus. 7. Sphenoidal fasciculus. 8. Corpus callosum. 9. Caudate nucleus. 10. Optic thalamus. 11. Internal capsule. 12. Lenticular nucleus. 13. External capsule. 14. Claustrum (Vormaner).

Fig. 3.

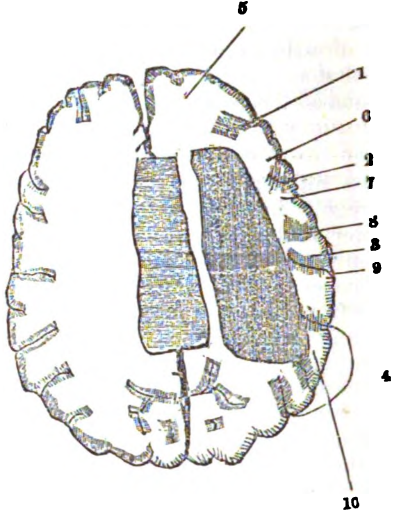


Fig. 3. Abscess (shaded) as seen by a longitudino-horizontal section on a level with the corpus callosum. 1. Upper frontal fissure. 2. Vertical frontal fissure. 3. Fissure of Rolando. 4. Inter-parietal fissure. 5, 6, and 7. Upper, middle, and lower frontal convolutions. 8 and 9. Anterior and posterior central convolutions. 10. Parietal lobules.

The nodule (Fig. 4) was about the size of a large hickory-nut. It involved the white matter and the under portion of gray matter at a point corresponding externally to the superior parietal lobule or convolution, a little anterior to the middle of the inter-parietal fissure. Its anterior extremity just grazed the middle portion of the gray matter of the ascending parietal convolution. The nodule was apparently firm. The abscess (Figs. 3 and 4) extended on all sides of the irregular body, and the exact limits of the former were determined by transverse sections to be as follows: Its anterior extremity reached a point in the centrum ovale corresponding to a plane, just in front of the caudate and lenticular bodies, externally through the anterior halves of the first, second, and third frontal convolutions. Its posterior extremity reached a point in the centrum ovale of the parietal, near the plane of the parieto-occipital fissure. The abscess in its anterior half involved white matter only, but close up to the gray

Fig. 4

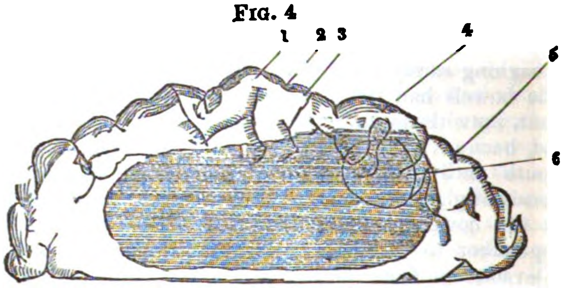


Fig. 4. Abscess (shaded) as seen by a vertico-longitudinal section made a little externally to the basal ganglia through the cortical substance and centrum ovale of the right hemisphere. 1. Ascending frontal convolution. 2. Fissure (upper end) of Rolando. 3. Ascending parietal convolution. 4. Superior parietal convolution. 5. Parieto-occipital fissure. 6. Nodule.

substance. Its posterior portion involved the white matter, also the inner part of the gray substance of the adjoining convolutions. The posterior one fourth of the abscess involved the gray matter to the greatest extent, and approached near the surface at the most posterior part. It had, therefore, destroyed the centrum ovale directly in relation with, *a*, the posterior parts of the first and second frontal convolutions; *b*, the middle regions of the ascending frontal and ascending parietal convolutions; *c*, the middle and lower portions of the superior parietal convolutions; *d*, the upper portion of the inferior parietal convolution. The gray matter destroyed was chiefly in the anterior parietal convolution and the superior parietal lobule. The entire length of the abscess was between four and five inches.

The left hemisphere showed no pathological lesions.

Thorax. Heart and large vessels were normal in appearance. The apex of the left lung contained four cancerous nodules, varying in size from that of a Lima bean to a horse-chestnut. The apex of the right lung was the seat of a nodule about the size of a hickory-nut. The middle and lower portions of the lungs were anæmic. The pleuræ were normal except at the apices of the lungs, where slight adhesions were formed over the nodular growths. Slight effusion in the left pleural cavity.

Abdomen. The uterus, ovaries, and ligaments of the womb were the seat of fourteen cancerous nodules, most of which were not larger than a hickory-nut. The liver, spleen, kidneys, and pancreas were anæmic, but free from cancerous growths. The stomach was empty, pale, and contracted, but no induration of its walls was discovered. The upper and lower bowels contained a small amount of fæcal matter scattered throughout their entire extent. The contents of the bowels were soft. No evidence of intestinal obstruction could be detected. The rectum was empty.

Microscopical Appearances. The nodule in the brain was composed of blood-vessels, brain-substance, extravasated blood, and blood-pigment. No cells of a suspicious character were seen.

Remarks. The abcesses cannot be attributed to the presence of a cerebral tumor. The history of the removal of a malignant growth from the left breast one year before, naturally suggested to me the probability of a similar one in the brain. No local interference with the venous or arterial circulation of the brain was detected at the autopsy. As causative agents, apparently nothing beyond a profound lowering of the vital forces and the blood infection attendant upon the presence in the system of several cancerous masses were found. If in these lies a sufficient cause, I am at a loss to know why abscess of the brain is so infrequently found in connection with cancer of other portions of the body, or why it is not more generally associated with general anæmia.

Remittent respiration is referred to by Hughlings Jackson,[1] although he does not give it that name, and Cheyne-Stokes respiration by nearly every recent author on nervous diseases, but I find no allusion to the peculiar intermittent variety, found in this case, in which three or four respiratory movements of equal length and depth were followed by distinct intermissions varying in length from fifteen to eighteen seconds.

Just before the patient's death, when the respiration approached the Cheyne-Stokes character, there was no period or interval of several seconds duration, during which the respiration intermitted, but the movements were continued regularly, increasing or lessening as the effort at respiration reached the maximum or minimum.

One or more cases with respirations differing from the Cheyne-Stokes similarly to this may be found described in a joint paper presented at the Northern Medical Society of Philadelphia, by Drs. Mills and Ott.[2]

The abdominal respiration noted in the clinical history may be imitated by any one in health by first voluntarily expanding the abdomen, then allowing the chest to be inflated subsequently, the expiratory movements taking place in the order of time, in which the inspiratory were effected. It differs from the form of abdominal breathing referred to by Hughlings Jackson in connection with cerebral hæmorrhage. It is a grave omen, and is most commonly found in cases of great prostration as in typhoid fever and shock, or it is associated with certain brain diseases attended by a similar condition of the vital forces.

The inflammatory changes that occurred in the right eye and ear with the subsequent loss of vision and hearing in these organs cannot be accounted for by any appreciable lesion in the pons, medulla, or at the base of the brain adjacent to the optic nerve. The well-known experiments of Waller, Bernard, and Brown-Séquard, on the effect of stimulation and paralysis of the cervical ganglia of the sympathetic nerve aid us in attributing the trophic changes found in the eye to the local trouble present in the right side of the neck, which preceded the affection of the organs of the special senses. I regret that we failed to examine the indurated tissues of the neck, and to ascertain the condition of the sympathetic nerve and ganglia in this region.

The general and cerebral thermometric records of this case present some points of interest.

General Thermometry. According to the physiological experiments of Hitzig, Eulenberg, and Landois quoted by Mills,[3] the heat controlling centres are situated in the cerebral cortex of the motor regions around the fissures of Rolando, especially in the ascending convolutions. Usually, but not constantly, destruction of this area gave rise to increased, and irritation produced lessened temperature in the extremities of the opposite side of the body. In the present instance the large abscess involved to some extent the supposed thermic area of the right side. Comparative observations of each axillary temperature were made on seven different occasions, and were as follows: —

Date.	Right Axilla.	Left Axilla.
September 8		99° F.
September 12	96° F.	99.4°
September 13	97.9°	98.4°
September 14	97.9°	98.2°
September 19	97°	98°
September 22	97.6°	98.2°
September 23	98.9°	98.2°
November 11	95.5°	98.2°

The temperature of the right or non-paralyzed side of the body only once exceeded that of the left, when the thermometer registered .7° higher in the right than in the left axilla. The temperature of the left armpit ranged from .5° to 3° higher than that of the right. During the first shock to the system produced by the abscess, and just before death, when paralysis was most complete, the difference between the two sides of the body heat was greatest, being 3.4° at one time, and about 3° at another.

---

[1] Reynolds's System of Medicine.

[2] Philadelphia Medical and Surgical Reporter, July 3, 1881.

[3] Philadelphia Medical Times for January 18, 1879.

Cerebral Thermometry. I shall only refer to the extended observations of Broca, Gray, and Maragliano, and Sepelli, on cerebral thermometry in health and disease. Their conclusions are in harmony with each other, and their utility has been demonstrated by observations made on at least two cases of tumor of the brain, one by Dr. Charles K. Mills,[1] and the other by Dr. Landon Carter Gray,[2] who was the first in this country to investigate the surface temperature of the head in health. Dr. Gray found the average normal temperatures of the stations on the left side of the head to be for the frontal .65° F.; for the parietal .85° F.; for the occipital .72° F., higher than those of the corresponding stations on the right side. He gave as the average normal temperature of the right frontal station 93.71° F.; of the left 94.36° F.; of the right parietal 93.59° F.; of the left 94.44° F.; of the right occipital 91.94° F.; of the left 92.66° F. Variations of more than 1.5° he considered suspicious of disease at that point, and of more than 2° strong evidence of a pathological condition.

Comparing the results of the surface temperatures of the head made on the case reported at length in this paper with those reported by Gray and others, we shall find several points of difference. The temperatures were from 2° to 4° higher than those obtained on the heads of healthy subjects, although the axillary temperatures of this case, taken at the same time, were normal or subnormal. The temperatures at the several stations on the left side of the head exceeded those on the right by about .5°, which is nearly in accord with the normal difference. The temperature at the left Rolandic station was .2° lower than that of the right on one occasion only. With this exception the temperatures on the left side were the highest. On September 23d, when paralysis of the left side of the body was complete, the surface heat at the left posterior frontal station was 2°, and at the left parietal 1.5°, greater than at the corresponding stations on the right side. Before complete paralysis had taken place in the left leg, there was nearly an equal increase of heat at the frontal and posterior stations; later, when the leg was powerless, the temperatures of the posterior stations exceeded their normal more than did those of the anterior. In the observations on cerebral thermometry in connection with brain tumors made by Drs. Mills and Gray, the stations nearest the growths, both of which happened to be on the right side, gave the highest average increase of temperature.

The area to which the occluded vessels in embolic hemiplegia are distributed is said to have a subnormal temperature.

I am not aware that the results of any observations of the surface temperature of the head made on persons suffering from abscess of the brain have been reported. No valuable conclusions can be drawn from observations made on a single case; especially is this so when the surface temperatures of the head are not more frequently taken than in the history of the one just reported. In health the head temperatures are from 4° to 6° lower than that of the axilla, being lowest posteriorly. In the present case, with a normal or subnormal axillary temperature, the head temperatures were elevated from 4° to 6° above their normal, the occipital, in one instance, being the highest, equaling the axillary, and exceeding its own in health 6°.

Dr. Allan McLane Hamilton, of New York, has reported the results of his observations on a case of meningitis, in which the occipital temperatures exceeded those of the other regions of the head.[3]

It is doubtful whether the local temperatures of the head in abscess of the brain will aid us in locating the disease to any particular region, but if the results of the observations already made on cerebral thermometry in brain tumor be sustained by future investigations, the surface thermometer may help us in differentiating abscess from tumor of the brain.

In a case of brain trouble, in which the diagnosis is between tumor and abscess, a limited surface area of one side (especially the right) of the head, with a temperature considerably elevated above the heat of the surrounding parts, would point to tumor; whereas, an elevation of the entire cerebral surface temperature would indicate abscess.

The direction of the destructive lesion in the brain, if we may judge by the progress of the paralysis, was from before backward, showing that the nodule occupied the region last involved instead of the first, as would have been the case if it had been caused by an embolus, and had in its turn given rise to the abscess.

◆

DR. JOHN CHAPMAN'S SYSTEM OF NEURO-DYNAMIC MEDICINE, WITH CASES.

BY B. O. KINNEAR, M. D.

In the early autumn of 1880, having read the works of Dr. Chapman, and feeling convinced, after the perusal, that the system advanced and advocated deserved trial in a wider sense than I think the profession in this country have hitherto given it, I determined, acting carefully in accordance with his directions, to apply it in my practice whenever opportunity afforded; that is to say, when in any case there was no complication to hinder the *safe* use of heat or cold over the spinal nervous centres.

A careful examination of those points which might prevent, or rather do prevent, the use of one or the other is as strongly urged as the advocacy of the method; thus I would say that a knowledge of when *not* to use the treatment is essential before beginning it. With such information, excellent and speedy results may be obtained in cases in which medicines and other remedies have usually only a temporary effect. Acting carefully, to say that I have been pleased with the sequels to its application in general practice, would be to offer very small praise; I have been astonished and delighted.

To make what follows plain and easily understood, I will give, in a few sentences, a concise explanation of Dr. Chapman's theories, namely, that ice in disease, used properly in rubber bags of the right length and width over the spinal and sympathetic centres, dilates the arterioles controlled by said centres, and arrests, at the same time, hypersecretion from the glandular system, checks spasmodic and irregular muscular movements of voluntary and involuntary muscles; and arrests hypernutrition, by its sedative action upon trophic centres. Heat used likewise acts in exactly an opposite manner.

---

[1] Philadelphia Medical Times, January 18, 1879.

[2] Hamilton's work on Nervous Diseases, 2d edition, page 22.

[3] Ibid.

In respect to Dr. Chapman's theory as to the cause of pain, I refer my readers to his work on Neuralgia, page 23, where a "summary statement of the author's theory" upon this subject may be found. I can state, however, that by the use of ice, in some cases of neuralgia, over the centres controlling the part affected, and in others, by the application of heat, I have relieved the suffering more quickly than by hypodermic injections of morphia, and in *every* case, *as* quickly. During the past eighteen months I have almost left off the use of this drug, to ease pain, finding a more satisfactory agent in heat or cold, used as directed by Dr. Chapman. Beyond the swift relief given to the sufferer the method has another most valuable qualification, namely, that no sickness at the stomach, no prostration, headache, or other disagreeable symptom, follows its proper use; which, we are all very well aware, is not very often the result in the use of opium and its preparations.

In the case of a lady to whom I was called, the patient was agonized from pain over the region of the gall-bladder, with much tenderness upon pressure. Inquiry and the general symptoms eliminated from the diagnosis both inflammation and the passage of gall stones. Ice was applied over the dorso-lumbar region, and in *three minutes* both the pain and *tenderness* disappeared, the sufferer expressing great surprise and pleasure, as despite the use of morphia in her former attacks, she never had been eased for several hours. In the so-called "wind colic," ice gives invariable and rapid relief when applied over the same region of the spine as just mentioned.

The "bilious attack" or "sick headache" is speedily eased by application of ice over the same segments of the spine; the vomiting ceases, and if the head is hot and painful, relief is readily given to these symptoms; comfort and very often sleep rapidly result.

Medicines may now be retained by the stomach to act upon the bowels and relieve the surcharged portal circulation.

In acute diarrhœa it has been swift in its action by checking the discharge from the bowels, as well as the vomiting when there is any, and, in those severe forms where there is great circulatory disturbance, restoring warmth to cold and cramped extremities.

It acts thus at once, according to this theory, in four distinct ways, namely, upon the spasmodic action of voluntary and involuntary muscles, upon the excessive glandular secretion, and upon the "vaso-motor spasm." I give a case to illustrate.

A female patient, about thirty years old, was attacked during the summer of 1881 by violent diarrhœa and vomiting, so severe as to simulate cholera.

All the usual remedies were used for twenty-four hours, except opium, without any abatement of the disease, but rather an increase, a watery stool passing, or an attack of vomiting occurring, every ten minutes. Just previous to the application of the ice to the spine, covering the last four cervical, all the dorsal and lumbar vertebræ, two severe and prolonged chills were experienced, during which both legs and arms turned of a bluish color, cramped, and became very cold to the touch. The action of the ice was marvelous, because instantaneous. The vomiting and diarrhœa at once ceased. Quickly the extremities became warm, and the patient fell asleep, being awakened every two hours to have the bag refilled, and reapplied. The ice was constantly used from eleven P. M. until five A. M., and upon visiting her next morning about nine A. M., she begged to have it used again at once, saying it was "the most comforting thing she had ever felt." The application was made at intervals during this day and the next; no relapse took place, and not only did the attack remain subdued, but the patient began to regain strength rapidly, much more so than is usual after such an illness.

In the vomiting of pregnancy, carefully used, it promises to be a successful agent. In a single case I found it of great service, enabling the stomach to retain and digest food.

In the mucous vomiting of the so-called "gastritis," it has in one case saved the patient's life by subduing the muscular irritability of the viscus, and checking the mucous discharge, enabling the stomach thereby to retain and digest nourishment, which would have otherwise been impossible, giving also by relief to the straining the much needed physical and mental rest, thus hastening recovery.

In simple leucorrhœa, with deficient and painful menstruation, I have found it of much service, producing a free flow at the period, and stopping the white discharge. Following Dr. Chapman's directions, I have successfully treated constipation with ice over the dorso-lumbar region, caused or rather become chronic from lack of proper blood supply to the muscular coat of the intestine, thus lessening nutrition and peristaltic action sufficiently, to prevent the forcing downward of effete materials. In the same manner the leg muscles, or any others, may atrophy and fail to perform their function, which loss, I am convinced, is, in the majority of cases, caused by vaso-motor spasm, or, in other words, by a hyperæmia of the sympathetic ganglia controlling the diseased parts.

In hysteria I have found excellent results from the use of ice, by subduing the hyperæmia of the sympathetic ganglia, and those spinal centres which give rise to the muscular spasm when unduly excited, as in these cases. The patient often quickly becomes quiet, warm, and falls asleep. In jerking of the lower limbs at night it frequently works like a charm when there is nothing to contra-indicate its use.

In sleeplessness, due to excessive use of the brain from almost any cause, ice applied low down (dorso-lumbar region) will produce sleep and give refreshing rest by dilating the arterioles of the lower body, thus withdrawing from the cerebral circulation its excessive supply, the *cause* of the sleeplessness. When the ice is not sufficient, thus applied, to have the desired effect, a double-columned hot water bag may be used over the sympathetic ganglia of the cilio-spinal region of Chapman, or, in other words, the cervico-dorsal vertebræ, and will assist, by stimulating these ganglia, to a hyperaction, causing thereby a contraction of the blood-vessels of the brain. This, it will be seen, was done in Case I., with an excellent night's rest as sequel.

In one case of asthma treated, very great and I believe permanent benefit has been given to the affection itself, while the general health is better than it has been for a long period. The patient had been a great sufferer for sixteen years, and is sixty years of age.

In the cases reported below, that the results there stated could be obtained by electricity, massage, rest, or medicines, or by all of these combined, either in so short a time as reported, or at all, seems to me very doubtful, but whether this hypothesis be right or wrong, they are remarkable as exponents of a great measure of truth in Dr. Chapman's theories practically and carefully applied; and, I trust, may be interesting to the profession.

In conclusion, I would again suggest to those of my medical confrères who may decide to try this method, not to do so without a careful attention to those *dangers* with which a careless or ignorant application will very certainly bring them face to face. Upon these *dangers* Dr. Chapman gives very clear and minute directions and cautions.

I have used Dr. Chapman's system in a number of other diseases with benefit to the patients treated, for this article has been written not with the intention of covering all the ground practiced upon, but simply as an exponent of what may be done by this method.

I have made no endeavor to either contrast the neuro-dynamic discovery of Dr. Chapman with the discoveries of other great neuro-physiologists and pathologists or to demonstrate that by the *results* of his treatment he has discovered much of the physiological nervous action upon blood-vessels, muscles, glands, tissues, etc.; but in a future article I hope to enter upon this subject fully, and will endeavor to show that, by the sequels obtained from the proper application of the method, truthful views of nervous, normal, and abnormal power are manifested.

INSOMNIA AND NERVOUS AFFECTIONS.

Case I. is that of a gentleman from Philadelphia who consulted me in October last, having been recommended to try treatment by Dr. Chapman's method.

The history of the case reads as follows, namely: —

Has been troubled with loss of sleep for many years, at present sleeping from two to three hours per day. Head and arms are hot at night, while the legs, as high as the knees, are so cold as to be absolutely painful; this last is not a constant symptom, being worse some days than others.

The conjunctivæ often become so congested at night that he has no sleep. Has spasmodic jerkings of the lower limbs nearly every night. The digestion is much diordered. Has suffered with a looseness of the bowels for many months, at times amounting to a diarrhœa. Is intensely nervous, and becomes very excited from trivial causes. States that he has had hæmorrhage from lungs; this is doubtful.

Suffers from lack of coördination of the muscles concerned in locomotion, pronounced by a prominent New York physician, "locomotor ataxia," and at times has a partial paralysis of both limbs. The right leg drags somewhat when walking.

Is very weak physically, and unable to take much exercise on account of the exhaustion to mind and body which ensues. Upon examination, two of the middle dorsal, the last cervical, and all of the lumbar vertebral spines, were found *very* sensitive to pressure, while the whole column was more or less so.

Applied an ice bag from the fifth dorsal to the first sacral vertebra for three quarters of an hour. During its use the sensation was a burning one upon the surface covered, increased to the "feeling of the touch of a hot iron" over the very sensitive spines.

Ten minutes after the bag was removed the patient felt drowsy, and upon lying down slept soundly for an hour and a half. The treatment was continued for five days, when business called him away, but so much relief was experienced that he decided to return in November, to remain as long as was thought necessary.

He returned upon November the 23d, ice being applied on the evening of that day for one hour and a half before going to bed.

November 24th, ten A. M. Patient had a quiet night, but did not sleep much; awoke feeling sick at the stomach, which was at once relieved on application of the ice. One large loose stool after breakfast. The ice was used seven hours through the day to the dorso-lumbar region. One more loose stool after a dinner of soup, fish, and oysters; troubled by flatulence. The muscles of the back upon each side of the spinal column became tender from the long employment of the ice, and the burning sensation during its application continues. In the evening felt tired but not weak; feet comfortable and warm; complains of hot upper extremities, and a feeling of pressure upon the head.

November 25th. Slept between six and seven hours, and awoke refreshed. Ice was used four and one half hours through the day. One loose movement of bowels; felt a tendency to faint during the afternoon. At ten P. M. left the patient comfortable, with the feet quite warm; feeling of pressure upon head remains.

November 26th. Had a quiet night, but slept little, feeling uncomfortable upon waking. Ate a hearty breakfast, however. Ice used four hours during the day. No stool at all; much flatulence and rumbling in bowels. Placed the ice the whole length of the spinal cord this P. M. from the fourth cervical to the first sacral, which resulted in an attack of vertigo, due, I believe, to an excessive dilatation of the arterioles of the brain from the sedative action upon the already depressed vaso-motor or sympathetic cervical centres. The attack lasted only a few moments, the ice being at once removed from the cilio-dorsal region of Chapman. Left the patient at ten P. M. very comfortable; feet continue warm.

November 27th. Slept several hours, being very quiet when not asleep; woke refreshed; one large, loose stool after breakfast, which did not cause him to feel weak; flatulence continues, but not so troublesome. Ice used over dorso-lumbar region five hours through the day.

November 28th. Had a loose stool after breakfast; slept well. Ice used seven hours through the day. Asserts that he is much stronger than when he arrived.

November 29th. Slept, but passed rather a restless night; two loose stools in the day; ate three good meals, and enjoyed them.

November 30th. Slept well; had some jerking of legs at four A. M.; one stool; less flatulence; feet remain warm all the time.

December 1st. Slept well; head a little dizzy at intervals.

December 2d. Slept well; feels much refreshed; "best feeling day yet;" the first solid stool passed that he has had for many months; patient rather excited over his rapid improvement.

December 3d. Had a quiet night; one small, loose stool, and is depressed in consequence.

December 4th. Slept well until three A. M., when awakened by flatulence and pain in the shoulders;

ate heartily through the day, passing another natural stool in the evening; there is no burning sensation upon application of the ice now, nor does any tenderness of the muscles of the back remain; patient likes to have the ice on, and enjoys its use; both legs are much stronger, and the right, which dragged in walking, no longer does so.

December 5th. One natural stool; did not sleep so well as usual. Instead of employing ice this evening to the dorso-lumbar region, used a double columned hot water bag, filled with water, at a temperature of about 120° F., over the sympathetic centres in the neck, the object being to produce sleep, by contracting the cerebral capillary circulation.

December 6th. Patient slept soundly through the night (ten hours) and awoke, as he said, "feeling like a new man;" one natural and one loose stool. Ice used three hours through the day.

December 7th. Slept until three A. M., and was quiet afterward; ate a good breakfast; asserts that he "feels much stronger in all respects;" the general nervous irritability, which has been severe hitherto, grows less daily, while the patient looks like a different man; evidently gaining in weight. He remained in Boston until the 15th. Improvement as follows: An average of from six to seven hours' sleep every night; the cessation of the diarrhœa; a continually increasing appetite, with much improved digestive powers; a gain of several pounds in weight; nervous irritability greatly lessened; perfect recovery of the use of right leg, and a large increase of bodily strength, as was evident by the power shown in taking physical exercise.

December 25th. Has continued to improve, and is doing well, despite working much more, both physically and mentally, than he ought to do or would have been allowed to do under my *direct* care; the appetite is good, and he obtains a full night's rest about every other night. Ice used two hours in the day.

March 22, 1882. I continue the notes of the case in the patient's own words at this date: —

"I have great pleasure in stating that from the very first day of the ice treatment until this morning I have steadily improved in every respect.

"I have been sleeping from the first of the year an average of from five to seven hours per night. All the disagreeable nervous symptoms that so much distressed me after any exertion have gone. My lower extremities are as warm as a baby's. My appetite is good, and I can digest almost anything that comes upon the table. I keep up the use of the ice once a day, before going to bed."

The patient was treated exclusively by the ice, as stated above, with the exception of an alkaline mixture given to assist in relieving the acidity of the stomach, and a few calomel powders, of one grain each, administered with the intent to alter the clay-colored stools to a natural hue, in which they succeeded. The *rationale* of treatment after Chapman was that by the constant application of the ice for many *hours* during each day, in the early stage, the hyperæmic nervous centres controlling the nerve *cells* of the intestinal glands might be kept steadily in a state of sedation during the time the patient was up and about, thus preventing a recurrence of the surplus of blood to the spinal centres, and so an immediate recurrence of the diarrhœa. At the same time the arterioles of the lower portions of the body, in a state of contraction almost constant, as shown by the persistent coldness of the legs and feet, with loss of muscular coördination, might be kept dilated by the sedative action of the ice upon the hyperæmic, sympathetic, or vaso-motor centres, thus warming the extremities, and at the same time producing sleep, because withdrawing, by the dilatation of the arterioles in the lower body, the surplus blood in the brain, which in this case seemed to be the cause of the sleeplessness. That hyperæmia of the capillaries of the brain *was* the cause I think is proven by Chapman's method of reasoning from the astonishing result of the first use of the ice over the dorso-lumbar centres, producing sleep immediately, in the daytime, and by the effect of the hot-water bag over the "cilio-spinal" region the night that ice was not used. What the recovery of this case proves in regard to the truth of Dr. Chapman's theories of spinal and sympathetic control over the glandular system and blood-vessels, seems to be self-evident, and needs no comment. This case had been under treatment in New York and Philadelphia without more than very temporary benefit. To test the method thoroughly the patient was allowed to eat solid food from the outset.

NEURALGIA OF THE HIP AND KNEE-JOINTS.

CASE II. April 27, 1881, Mr. N. consulted me in regard to his wife, a young woman, who had been suffering steadily for the previous six weeks with no assistance rendered by the usual measures. Upon inquiry found that she has had several previous attacks, the first one following a miscarriage, which took place three years ago. The disease has recurred with increasing frequence latterly, and each successive seizure is of longer duration than the one preceding.

The patient's digestion was much disordered; bowels moved every day; the arms and legs almost constantly cold and damp, so cold as to be disagreeable to the touch; the physical strength much reduced, with fits of mental depression of frequent occurrence.

Sleeplessness was constant, even upon those nights when the pain was not so severe. The heart was irritable, the lungs healthy. Pain upon pressure was experienced over the last cervical, fourth and fifth dorsal, and all of the lumbar, vertebræ. The usual stinging and burning sensation was felt over these regions upon the application of the ice.

The patient has been treated thus far by large doses of morphia, bromide of potash, chloral, and she has sometimes inhaled as much as twenty ounces of ether in a night, to produce sleep and ease pain. All medicines were stopped, and an ice bag applied over the vertebræ, from the fourth cervical to the first sacral, to be so used one hour and a half every night and morning.

May 7th. Sleeplessness greatly relieved, pains not so violent, nor for so long a period daily. Appetite good, and the digestive powers strengthened. Physical strength much improved, and has taken short walks several times. Arms and legs much warmer. Complains of pain in precordial region and palpitation of the heart. Has very severe pain in calf of right leg. Always cold now, and in pain from early morning, when the suffering begins and lasts until reaction takes place, about three P. M. She then becomes warm, and and the pain is eased. Ordered the ice to be used daily two and one half hours upon awaking, one and a half hours in the afternoon, and one hour before going to bed.

May 13th. Strength much improved in every way; depression almost gone; appetite excellent. Has been out some days the whole afternoon without great fatigue. Pain in hip, knee, and calf, only an ache. Hands and feet constantly warm. Sleeps soundly; slight palpitation of the heart remains. Ordered: Tinct. ferri chloridi ℥i., after meals, in water, and tinct. digitalis, minims x., potas. bromid., gr. x., tinct. cinchon. co. minims 20. Take in water before meals.

May 19th. No pain; weight increased; appetite excellent; sleeps profoundly. Patient is convalescent, taking long walks daily. To continue the use of the ice two hours every day for a month.

June 31st. Patient well, having gained fifteen pounds in weight, and feeling just as strong as she ever did.

In this case the sympathetic or vaso-motor and sensory centres were both affected, as shown by the pain and the constantly cold upper and lower extremities.

I did not see the case as often as I wished, or I could have made more minute notes of the daily effect produced by the treatment. The only medicines used were in the prescriptions given above, and they were not prescribed until the patient had advanced far toward convalescence. This lady was told to use the ice one hour per day until the end of August, but did not do so. Since June last there has been, I believe, one *slight* return of the pain.

GREAT PROSTRATION AFTER PROLONGED LABOR.

CASE III. is one of prolonged labor in primapara, otherwise normal, left occipito-anterior position; great prostration after confinement, but no alarming hæmorrhage. The child was born January 19, 1881. Up to March 4th following the patient remained prostrated; about holding her own. During this period she suffered with night-sweats, continued constipation, and quite severely from catarrh of the posterior nares. The appetite was excellent throughout this time, but she remained so weak that she would become much fatigued by even standing a few moments upon her feet. Her extremities were cold very frequently. She was treated by doses of laxatives, and various laxative foods, to relieve the constipation, — belladonna for the night sweats and a variety of tonics, iron, quinine, and strychnia, with no result beyond the most temporary benefit. Ice was applied upon March 4th from the fourth cervical to the last lumbar vertebra for one hour per day. The patient began to improve in general strength after the second application. Within a week she was walking out every day, and upon March 20th came to my office, a distance of three quarters of a mile. She steadily improved, the constipation disappeared, and the nasal catarrh was much relieved.

According to Dr. Chapman's views, the ice acted in this case upon the vaso-motor centres, thereby warming the cold extremities, and supplying at the same time a greater amount of blood to the anæmic muscles of the intestine, stimulating the bowels therefore to normal peristaltic action, and so relieving the constipation. It acted also as a sedative upon the nerve centres controlling the gland cells of the posterior nares, which, by their over action, produced the nasal catarrh; it checked this trouble permanently. The child of this patient was also troubled by the most severe flatulence and constipation. After three weeks spent in useless endeavors to relieve it by the usual remedies, I applied ice to the dorso-lumbar region in a very small bag, with permanent relief to the disease in a few days.

CASE IV. is that of a Boston gentleman who consulted me in December of 1881. He had been troubled with sleeplessness for a long period; very much impaired digestion; nervousness which showed itself by great mental excitability, alternating with delusions and intense depression. The bowels were costive, while the feet and legs were constantly more or less cold and moist. The head was hot, and as the patient expressed it, "felt too full of blood all the time, accompanied by a hissing sensation in the ears."

Ice was applied from the second dorsal to the fifth lumbar vertebra, one and one half hours, twice a day. Improvement was immediate to the sleeplessness; the digestive powers became gradually stronger, and the bowels moved regularly. The lower extremities were soon permanently warm and dry, and the nervous symptoms disappeared to a great degree, although the patient was subject to much mental worry during the treatment. This improvement lasted from January until May, when he had a temporary relapse, which has been overcome, and the strength renewed. His physical strength has much increased under the treatment. He is a man of middle age.

AMERICAN DYSPEPSIA.[1]

BY JAMES H. ROBBINS, M. D., OF HINGHAM.

WE are beginning to realize that at the present day there is a notable failure of the organs of digestion.

Many would persuade us that such failure affects especially the people of the United States, and use the term American dyspepsia as if the existence of such a complaint were fully conceded, though, by what we can gather from medical periodicals, and observant tourists, the same delicacy of stomach prevails in Great Britain and on the European Continent, while an eminent English physician, Dr. J. Milner Fothergill, is the first to emphatically call attention to the matter. To it he devotes, in a text-book of practice, a chapter worthy of the importance of the subject, nor does he anywhere hint that a failure of digestion is more common here than in other countries.

It is the object of this paper merely to speak of dyspepsia among our own people, and to emphasize and illustrate the fact that, more than of anything else, it is the result of neurosal causes.

Eighteen years ago, in the edition of 1866 of Dr. Flint's Book of Practice, the author says in his general remarks upon dyspepsia, that "It is undoubtedly less prevalent than it was a quarter of a century ago in this country"; but in examining the medical periodicals of to-day, and in conferring with busy physicians, we find that a large proportion of those who seek medical treatment, a larger proportion than at any previous time, complain of poor digestion and biliousness.

Scientific research and skill in therapeutics are stimulated to their utmost to furnish stomach tonics, food digestants, and different aliments already digested and ready for absorption by the debilitated stomach. The leaves of even our medical journals abound with advertisements of therapeutic agents of this nature, while physicians in their great desire to furnish their dyspeptic patients with the most elegant, palatable, and scientific aids to digestion, become willing instruments in the sale of large quantities of proprietary or trade-marked medicines. The prevalence of indigestion is also evinced by the popularity of a vast number of quack preparations for the stomach, and by the great and increasing quantities of laxatives and cathartics taken for constipation, almost every family having its favorite patent pill.

---

[1] Read before the Massachusetts Medical Society at its Annual Meeting, June 14, 1882.

In spite of all this therapeutical effort, designed to meet the vast demand of this prevalent debility of the digestive organs, indigestion increases, while the means for its relief lag far behind, leading one to question whether the coming American is to digest his food himself at all, or whether it will not be digested for him outside his body, and administered ready for absorption and assimilation.

This prevalent, so-called *American* dyspepsia, seems to be without a morbid anatomy, which is perhaps the very reason why we often practically overlook it, our text-books of theory and practice being sadly deficient in hints concerning this form of weak digestion. While they abound in treatises upon gastric catarrh, ulcer, gastric carcinoma, dilatation, liver diseases, and distinct intestinal maladies, we have to be content with scraps and hints occurring sparingly in books of general practice, works on gynæcology, diseases of the nervous system, and monographs concerning neurasthenia, for light upon mere weakness and failure of the digestive organs. Dr. J. Milner Fothergill, so far as I can find, is the only author who furnishes us with a chapter on the subject, at all commensurate with its importance. Some of the principal causes usually assigned for American dyspepsia are as follows : —

First. Rapidity in eating.

Of course no one would defend hurried eating as beneficial, but I fancy its injurious influence has been over-stated.

Nearly all animals eat in haste. And it is an old proverb among farmers, " Quick to eat, quick to work," which applies equally to men and horses. A horse that eats slowly is slow mettled and dull. If a farmer wishes to employ a new laborer he is prejudiced immediately against the man who eats with deliberation, which proves that the rate at which a man consumes his food is merely a matter of temperament.

Another fruitful source of this trouble is supposed to be found in unsuitable or improperly prepared food, such as badly cooked meats, bread fresh from the oven, or ill made, too hot beverages, tea over-steeped or even boiled, fried food, and that national institution, the pie, which it is now the fashion to condemn. As Charles Dudley Warner humorously says, " There has come over this country within the last generation a great wave of condemnation of *pie*. It has taken the character of a movement. . . . It is safe almost anywhere to denounce pie, yet nearly everybody eats it on occasion. A great many people think it savors of life abroad to speak with horror of pie."

True as it is that the foregoing edibles are not the best food for a weak stomach, it yet seems to me that they do not necessarily produce weak stomachs. Every physician knows that such food is very commonly given, even to infants, among certain of the laboring classes, with no such disastrous effects as one would expect.

Over-eating is a very common bugbear. It is true that many eat more than they can well digest, which is over-eating for them. But it is as true of the animal economy as of any other machinery, that force requires fuel according to its degree. Americans, if we compare them with people of other nations, are not large eaters, and do not consume any more than is necessary to produce the required bodily and mental force. Alas, the trouble is, they are not able to digest so much as they need.

Dr. Flint and other writers say that gluttony does not often produce dyspepsia, but is more likely to give rise to gout or some other malady.

The use of ice-water is unsparingly condemned. Enthusiasts attribute to it all our stomach weakness, whereas, it is really not used to any great extent outside the cities and large towns. The effects of over-indulgence in it are so immediate that people soon learn the extent to which they may drink it, and thousands have learned either not to use it at all, or sparingly, while many insist that it is better to use ice-water moderately than to keep the stomach afloat with excessive quantities of water not iced.

The universal use of fine white flour, which consists principally of starch, with gluten and phosphates bolted out, is often mentioned as a cause of impaired vitality and dyspepsia.

To it is attributed the degeneration of the teeth, and the starvation of the nervous system. We may well hail the day when our people shall make their bread of the entire grain, but we must acknowledge that the poorer classes who subsist most largely upon white flour, are not the greatest sufferers from stomach failure.

But we cannot here examine the great number of alleged causes of American dyspepsia.

One great principle in nature is apt to be overlooked by many theorists, namely, the very remarkable power of the human system of adapting itself to all sorts of dietetic conditions and even enormities, and appearing to thrive upon them. German babies are not uncommonly given a daily allowance of beer, beginning when a few weeks old.

School boys of the rugged sort will eat three meals, visit the pantry every time they come into the house, and by way of variety regale themselves on green apples, lobster bought on the street, or some other strange thing which only boys will eat. Nature may revolt now and then by emesis, but seldom by the Nemesis of chronic dyspepsia. The fact is that to no special habits of eating, times of eating, nor articles of diet can the weakness of the American stomach be attributed, either wholly or in any important degree.

We are now brought to the brief consideration of a class of causes which thinking physicians must admit to have a powerful and wide-spread effect, detrimental to digestion and nutrition, compared to which all other causes are insignificant, namely, those causes of a neurosal nature.

Every one is familiar with the effects upon digestion of mental and emotional states even in the healthy subject. Dr. Carpenter, in his great work on physiology, has much to say on this head, with vivid illustrations. Every physician can recount similar illustrations from his own observation by the score. Bad news will arrest or retard digestion, and often cause vomiting. No influence in the world is more powerful to take away all appetite for food and create a loathing for it than grief. Anxiety and apprehension and a good digestion are incompatible. Fear will dry up the saliva, stop digestion, and frequently bring on diarrhœa. Many a soldier from this cause has been put on the sick list on the eve of battle. Worry and petty mental annoyance are, perhaps, the most universal, at the same time the least recognized, of influences affecting digestion. Mental strain, overwork, or complete absorption for a length of time by a train of thought hold the digestive functions in abeyance. Ambition, the goal of which is unattained or far removed, sharp competition, without immediate or satisfactory results, cause wasting of the body, and feeble nervous supply to keep the nutritive functions up to their work. Shakespeare makes Cæsar say, —

> "Yond Cassius has a lean and hungry look;
> He thinks too much . . .
> Such men as he be never at heart's ease
> Whiles they behold a greater than themselves."

Conversely to all this it may be stated that pleasurable emotions, a contented mind, congenial employment, a measure of success in one's endeavors, sufficient recreation, and opportunity for nervous repose seem indispensable to a healthy stomach.

These conditions existing, a person may endure a great deal of arduous toil, either bodily or mental, without detriment, but rather with benefit, to a healthy working of function. The machine is then well lubricated, and does not wear from friction.

But what peculiar reference has this class of neurosal causes to American dyspepsia?

I take it to be this: Such causes operate with special power upon us of the present generation of the Anglo-Saxon race, whose ancestors came to this country several generations ago, for the reason that from these ancestors we inherit nervous systems of impaired vigor. Our parents and grandparents were so strenuously engaged in an arduous, ambitious, and competitive endeavor, amid the rapidly changing conditions of life in a new country, to secure competency and respectable social position, that they expended to a great degree their own vital powers, and have accordingly transmitted to their children delicate and neurotic constitutions. If it is granted that we inherit a diminished vitality, it is easy to see how ingeniously the pressure, the wear and tear, the strain, the excitement, the hurry and worry incident to this breathless, bustling life of ours affect the nervous system. It is also evident that impairment of digestion and mal-nutrition must be the certain result of such a condition of things.

Among the causes which are thus acting upon large numbers and classes of our population are, first, the manner of rearing our children.

Weakly at the start, they are forced into precocity by multitudes of ingenious and complex toys, plays, and amusements suited to rouse and stimulate intellectual and emotional activity, by sight-seeing and excitements more than are wholesome, by making premature men and women of them instead of romping children.

Under this head comes our system of education, with its high pressure, its cramming, and competition during too many weeks of the year. Arrived at adult life, our children are sparse in body, stooping in form, nervous, emotional, and possessed of stomachs which have to be treated by rule in order that they may perform their functions.

Second. School teaching.

Teachers of both sexes form an astonishingly large class in our communities if we add to the numbers in active duty the hosts who have given the best of their lives to teaching, and are either completely or partially broken down by the pursuit. It is difficult to estimate the onerous and nerve exhausting work demanded of instructors by our exacting modern systems. A teacher who has taught for a few years, and has a good, healthy digestion, is exceptional.

Third. Lack of simplicity and honesty in living.

This applies especially to mothers of families, who, in addition to their simple domestic duties, strive too much for appearances in the dress of themselves and of their children, and in other ways endeavor to maintain a style of living beyond their means.

Fourth. Business strain, worry, and apprehension.

During the late financial crisis it was a matter of common observation among physicians that business men, as a class, were out of health and dyspeptic, and that it was an almost hopeless task to benefit one of these dyspeptics by medical means.

Fifth. The present unsettling of religious beliefs.

The unrest of the age has pervaded the domain of conscience, and harassing doubts usurp the place of confident faith. The conflict of the old beliefs with modern Agnosticism is a fruitful source of mental disquietude of the most disturbing kind. Sleepless and tormented nights bring to many a sensitive soul days of physical suffering proportioned to the mental anxiety that has preceded them.

Sixth. The state of the weather.

This subject would furnish material for an extended essay. Multitudes of people are in fair health when the weather is fine, and the barometric pressure high, but with the falling mercury their nervous vigor wanes, and if dull weather is long continued they lose appetite, and become dyspeptic. Many people's digestion is impaired by the heat of summer, and their stomachs do not recover tone till the coming of the cold season. In so variable a climate as ours, with its trying extremes of temperature, the effect of the changes is in calculable upon people of weak vitality.

Seventh. Valetudinarianism.

Under this head comes the very general anxious effort at personal comfort and hygiene, the solicitous watching and study of the different functions of the body, which are best performed unconsciously. Very many of the believers in homœopathy early acquire the pernicious habit of watching their daily and even hourly symptoms, thus cultivating, by what Carpenter calls "expectant attention," a state of general hyper-æsthesia, and often a condition of actual functional disease.

Since the completion of this essay I have noticed that Dr. Oliver Wendell Holmes, in his recent lecture, Medical Highways and By-Ways, has touched upon this very point concerning homœopathy in his usual witty and incisive manner.

Our catalogue of widely acting causes is by no means full, but I have not time to extend it. Upon the treatment of this stomach debility I have no original nor peculiar views. As I said at the beginning of this paper, I wish merely to emphasize a class of causes which busy physicians are prone at times to overlook. If what I have said bears the test of common sense, it behooves us to be mindful of these considerations whenever called upon to treat our many cases of mal-nutrition and dyspepsia.

We may be powerless to stay or modify the influences of the present phase of our civilization upon the nerves and stomachs of the Anglo-Saxon race in this country, nevertheless, by being ever aware of these vast and wide-spread influences we shall find means outside the materia medica to benefit many a patient to whom drugs alone can bring but little help.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

DETECTION OF BLOOD-STAINS.

DRAGENDORFF[1] recommends the following methods of manipulation in the detection of blood-stains.

Particles of dried blood are first removed when possible, and reserved for further examination, and the scraped spot is tested as follows: —

(1.) A small piece of filter paper is moistened with distilled water and pressed on the spot for from five to thirty minutes. It is then removed and moistened with oil of turpentine, which has been exposed to the air, and a drop of fresh tincture of guiacum. The blue color should appear within a few minutes. If no blue color appears, it will hardly be possible to detect blood by any other test. A blue color does not, however, necessarily prove the presence of blood.

(2.) A part of the spot is macerated in a few cubic centimetres of a cold saturated solution of borax at 40° C. The solution, which gradually assumes a red to reddish-brown color if blood is present, is examined spectroscopically for oxyhæmoglobine. It has been stated that red inks from cochineal, a coloring matter from the feathers of the banana-eater and purpurinsulphonic acid may be confounded in this test with oxyhæmoglobine, since they show similar spectra. The first may be distinguished by being decolorized by chlorine water without yielding a precipitate. The second does not give the spectrum of reduced hæmoglobine when treated with a solution of sodium sulphide (one in five). Purpurinsulphonic acid yields a spectrum only when the solution is hot.

(3.) The guiacum test is repeated with a small quantity of the borax solution, if the spectroscopic best succeeds.

(4.) A portion of the solution is diluted with five to six volumes of distilled water, and a five per cent. solution of zinc acetate is added as long as a precipitate forms. This is filtered, washed, dissolved in one to two cubic centimetres glacial acetic acid, and examined spectroscopically for hæmatine.

(5.) A small quantity of the zinc acetate precipitate is dissolved on a slide in glacial acetic acid, treated with a crystal of sodium chloride, allowed to dry by exposure to the atmosphere, and examined microscopically for hæmine crystals.

(6.) A portion of the dried blood which has been scraped from the spots is tested for hæmine crystals, as under (5), and the guiacum test is then applied. A portion may be incinerated and the ash tested for iron. Nitrogen may also be tested for; if, however, the spots are upon iron it must be remembered that ferric oxide may absorb ammonia and yield the nitrogen test. Wool, silk, etc., may also be sources of error. It is difficult to detect blood upon rusty iron, since the blood-pigment forms a compound with ferric oxide which is not easily soluble. A solution of borax at 50° C., will remove the hæmoglobine from this compound. This solution may be examined as previously described; or the rust may be removed with acetic acid, and the solution examined spectroscopically for hæmatine.

(7.) It may be of value to determine the size and shape of the corpuscles if the blood is fresh; but in partially decomposed or dried blood the results are unreliable, since the corpuscles are generally much altered. Thin fragments may, however, be examined under the microscope in turpentine or some other liquid which does not act upon the corpuscles. After removing the hæmoglobine the residue may be tested for fibrine with an aqueous solution of iodine.

(8.) Hairs, fish scales, etc., often indicate the origin of the blood, and the blood of some animals when warmed with dilute sulphuric acid often evolves an odor peculiar to the animal from which the blood was derived. This is especially true in the case of fish, pig's, and cat's blood. Epithelium cells and sarcinæ frequently denote blood from the stomach, while that from abscesses contains fat, pus-corpuscles, and cholesterine. In cases of defloration epithelium cells and spermatozoa should be searched for.

(9.) It is not possible to determine exactly the age of a blood-stain. The older the stain the more difficult it is to extract the hæmoglobine. An aqueous solution of arsenious acid (one in one hundred and thirty) dissolves a spot one or two days old in about a quarter of an hour; one eight days old in about half an hour; one two to four weeks old in one to two hours; one four to six months old in three to four hours; one a year old in four to eight hours.

A solution of borax may be used to extract blood from soil. This solution may be examined spectroscopically, and 0.5 per cent. of blood may be detected in this way. Blood diluted with water may be precipitated with zinc acetate, when one part of blood in six thousand of water or in one thousand of urine may be detected.

According to Victor Schwarz[2] zinc acetate is to be preferred to tannic acid for the separation of blood from its solutions in well water, soap water, salt water, or normal urine, for the formation of Teichmann's hæmine crystals. For the solution of dried blood-stains upon linen the ordinarily employed potassium iodide is well adapted. The solution thus obtained is treated with zinc acetate. The spots may also be extracted by digestion for forty-eight hours at the ordinary temperature with a cold saturated solution of borax; to the solution thus obtained zinc acetate is added as long as the precipitate appears colored; by further addition borate of zinc only is precipitated, which hinders or retards the formation of the hæmine crystals from the precipitate. Blood is best extracted from mixtures with sand, earth, and turf, by means of the cold saturated solution of borax; much less thoroughly by means of potassium iodide, since the blood solution obtained with the latter decomposes very quickly, so that after a few hours a blood spectrum, which at first is plainly visible, can no longer be detected. In opposition to an older statement of Wessel, the author has repeatedly succeeded in obtaining hæmine crystals from blood which had become completely decomposed.

According to Struve[3] the detection of blood is most difficult in those spots which have a very pale color, and which are only visible by means of the sharper contour of their edges. In such cases Struve treats a large piece of the fabric containing the suspected spot in a suitable glass with a dilute solution of potassa. When the color of the alkaline liquid ceases to increase, the liquid is poured off and the fabric is washed with water. The solution thus obtained, which is usually turbid, is filtered, and to it a solution of tannin is added, whereby the liquid assumes a deeper reddish-brown color, and it is then made just perceptibly acid with dilute acetic acid. At once, or after some time, a more or less colored precipitate separates. This is collected upon a filter, washed, and two portions of it placed upon two glass slides. After the addition of a crystal of sodium chloride they are allowed to dry, and the blackish residue is then treated in the ordinary way with glacial acetic acid, in the one case with the aid of heat, in the other at the ordinary temperature. After standing quietly for some time, best from twenty to twenty-four hours, the hæmine crystals are sought first in the preparation formed with the aid of heat, afterwards in the one prepared at the ordinary temperature. In the former the crystals are found on the edge of the object glass, in the latter in the middle of the test; the last obtained result is decisive.

---

[1] Phar. Jour. Trans., vol. xii., page 586.

[2] Zeitschrift für Analyt. Chemie, 1882 xxi. 311.

[3] Ibid.

Struve calls attention to the fact that blood stains may become so changed by mould that by the microchemical examination they will neither yield the hæmine crystals nor permit the detection of the structural elements. The color of such dark stains is not due to the blood coloring matter, but to fibrine; they are soluble in dilute caustic soda, and the solution gives the different reactions for albuminous matters.

Curtmann has shown that when blood-sucking insects are killed stains may result in which human blood corpuscles are plainly recognizable. Bugs digest human blood more rapidly than mosquitoes do; in the former no trace of human blood can be detected after twelve hours, while in mosquitoes it can be easily demonstrated even later than twenty-four hours after ingestion.

Struve[1] has reëxamined the method suggested by Malinin and Schmidt for the diagnosis of blood-stains, which consists in heating them with thirty to thirty-five per cent. potash solution and measuring the corpuscles, in order to determine from what source the blood has been drawn. He finds that this method is valueless, because the blood corpuscles, after having been dried and then soaked with potash, do not attain their original size, and no conclusions of value can be drawn from their measurement.

EXAMINATION OF SPERMATIC STAINS.

Vogel[2] recommends the following method: The stain is softened with water, and in the moist condition is taken off with a knife, avoiding as much as possible the removal of any of the tissue on which it lies. A few small hairs are unimportant, however, as they are readily dissolved from the scrapings on the object-glass or slide with a drop of concentrated sulphuric acid. After two minutes one or two drops of tincture of iodine are added, the whole stirred carefully with a glass rod, and covered with a large cover-glass, which, if the dark-brown mass be too opaque, may be pressed down a little, unless it be intended to transfer smaller portions to other slides. The spermatozoa are stained distinctly brown, and are visible under the microscope in their whole contour, but it is not possible to keep the staining in longer than twenty-four hours unless the sulphuric acid be washed out, when the preparation is soon spoiled. Alcohol at once decolorizes the spermatozoa, showing the staining to be only superficial.

ARSENICAL BISMUTH SUBNITRATE.

The frequent occurrence of arsenic in bismuth subnitrate has been confirmed by Chittenden and Lambert.[3] Out of fourteen samples analyzed only one was found to be quite free from arsenic, whilst the average amount was found to be 0.013 per cent. or thirteen milligrammes arsenious oxide in one hundred grammes of the subnitrate. In one sample one hundred grammes were found to contain seventy-seven milligrammes or 1.2 grains arsenious oxide, which is about half a fatal dose of the poison.

In order to determine whether elimination of arsenic goes on at the same rate as its absorption, experiments were made upon a large, healthy dog, to which arsenical bismuth subnitrate, containing 0.01226 per cent. arsenic, was given in his food in gradually increasing doses. This treatment was continued for thirty-nine days, at the end of which time the dog was killed, and the various organs and tissues were examined for arsenic. The experiment showed that the greater part of the arsenic had not been absorbed, a result probably due to the fact that the arsenic in bismuth subnitrate is present in the form of a compound only very slightly soluble in water. This was directly proved by repeatedly drenching a sample of arsenical bismuth subnitrate with water, and examining the filtered liquid for arsenic by Marsh's test, the result being that not a trace of arsenic was found in the liquid. It may therefore be concluded that although medicinal bismuth subnitrate usually contains a weighable quantity of arsenic, the poison is not present in a form in which it is readily absorbed by the animal organism.

LEAD PIPES.

W. Thomson[4] refers to a case of poisoning through drinking water passing by gravitation through a one-inch lead pipe. Being asked to suggest a substitute for the lead pipe, he advised the use of a tin-lined lead pipe. However, the water which had passed through this pipe was found to be contaminated with lead to a considerable extent, and on examining some of the tin lining this was found to contain a large proportion of lead; in fact, all the samples sent to the author from various manufacturers, on analysis, were found to contain lead, and quickly contaminated water left in contact with them. The author was then informed that in preparing the lining the tin is poured down the side of a strip of lead into the hole left in the solidified lead in the cylinder previous to forcing it through the dies by hydraulic pressure. These tin-lined lead pipes are used to a large extent and principally in making communication between the beer in the cask and the pump on the counters of beer retailers. The author has tested many samples of beer passing through such pipes, the result being that the beer contained a considerable proportion of lead.

There is another kind of lead pipe manufactured called tinned lead pipe, the inside of which is covered with a very thin coating of a white metal to afford protection against the action of water on lead. In its preparation the molten tin dissolves the lead, and the coating is a mixture of tin and lead. This coating cannot therefore be regarded as a thoroughly efficient protection against the action of water on lead.

The author has analyzed a large number of aërated waters, which he found to be contaminated with lead from the fact that impure sodium carbonate was used in their manufacture. It was also found that pure water acted more strongly on comparatively pure lead than on lead alloyed with antimony to the extent of three fourths to one per cent.

---

[1] Journal of the Chemical Society, London, March, 1882, page 342, from Chem. Centr., 1881, page 710.

[2] The London Medical Record, 1882, page 205, from Wiener Med. Blätter, 1882.

[3] Journal of the Chemical Society, London, June, 1882, page 573, from American Chemical Journal.

[4] Journal of the Chemical Society, London, June, 1882, page 668, from Chemical News.

STRYCHNIA.

Messrs. Williams and Waters[1] claim to have discovered an antidote for strychnia in the organic base, first discovered by the former among the products of the destructive distillation of cinchonine with caustic potash, and to which he has assigned the name beta-lutidine. They find that this base causes a distinct increase in the tonicity of both cardiac and voluntary muscular tissue, also a retardation in the rate of the heart's beat, and that it arrests the inhibitory power of the vagus; that by its action upon the nerve cells of the spinal cord it, in the first place, lengthens the time of reflex action, and then arrests that function; finally, that it is successfully antagonistic to strychnia in its action upon the spinal cord.

INDICAN.

According to M. Thoms,[2] urine containing balsam of copaiva gives, upon the addition of hydrochloric acid, either alone or with the addition of a drop or two of nitric acid, a reddish-violet color similar to that produced by the same reagents in urine containing indican. In the former case alkalies change the red color to a green.

Recent Literature.

A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine. By OTIS FREDERICK MANSON, M. D., Professor of Physiology and Pathology in the Medical College of Virginia. Philadelphia: J. B. Lippincott & Co. 1882. 164 pages.

After a few pages devoted to introduction and the history of quininé the author begins the study of the action of this drug by investigating: —

First. Its action on animals.

Second. Its effects on man in health.

Third. Its effects on the human organism in disease.

Under the first and second of these are given the results of work done by various experimenters some decades ago. The action of sulphate of quinia in disease is spoken of more fully, and many authors are quoted.

As regards the amount which may be given in a day the author cites a number of instances where several hundred grains were given, in most cases without injurious effects; it is hardly necessary to say that the author does not approve of such excessive doses, and what is said of deafness resulting from the use of the drug is of interest.

A large portion of the work is devoted to the therapeutic use of the sulphate of quinia, and the author's large experience makes the book of much interest and value to every practitioner.

---

[1] The London Medical Record, 1882, page 203, from Proceedings of Royal Society, vol. xxxii., page 162.

[2] Journal de Pharmacie et de Chimie, March, 1882, page 366.

18

Medical and Surgical Journal.

THURSDAY, AUGUST 10, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE REGULATION OF SOURCES OF WATER SUPPLY IN THICKLY POPULATED DISTRICTS.

DURING the ten years ending in 1880 the legislature of Massachusetts passed one hundred and fifty-two acts and resolves with regard to water supplies for cities and towns, beside having spent a great deal of time in considering petitions for measures to provide pure drinking water from which there was no legislation. The question of the pollution of streams has acquired such importance as to occupy a large part of the attention of the committee on public health at the State House every year, and yet the difficulty of securing a sufficient quantity of water, uncontaminated by the refuse from human habitations or industries, seems each year farther from solution, so rapid is the concentration of population in the large towns, and so insatiable is their demand for "all the modern conveniences." All sorts of blunders are made every year in the effort to get quickly and cheaply water enough for manufacturing, for protection against fires, for street sprinkling, and for all the ordinary domestic uses. The quantity estimated to be sufficient for each individual for one day goes up rapidly from forty to one hundred gallons, and the natural result is that much of the supply must be of inferior quality or there is not water enough for the enormous waste which is sure to follow the unmeasured use of large public supplies.

As a consequence of the fact that there is no adequate general law governing such vital questions as water supply and sewerage, the legislature wastes an enormous amount of time annually in considering for the various towns, one after another, the same problems with which previous legislatures have wrestled; every municipality or ring is uncertain what measure of legislative wisdom will be meted out to its own plan or scheme, and the streams continue to be polluted, which furnish drinking water to at least one quarter of the population of the State. How far this is an injury to health is a matter of opinion, not susceptible of demonstration from the mortality returns; but that the public is convinced of the danger at least is evident from the great quantity of pure water purchased by those who can afford to do so.

There is only one remedy for the evil, namely, in general legislation covering the whole subject, and in restoring the State Board of Health to its former position, or creating a new board to have supervisory control of the whole matter.

THE NERVOUS SYMPTOMS OF MYXŒDEMA.

Dr. W. B. Hadden contributes to the July number of *Brain* some pages on the nervous symptoms of myxœdema, which, in view of the comparatively recent recognition of the disease, and the still somewhat unsettled views of observers as to its claims to be classified independently of renal affections, are not without interest. The principal symptoms of the disease are summed up by this writer under the following heads: (1.) Slowness of bodily movements. (2.) Slowness of intellectual operations. (3.) Constantly subnormal temperature. (4.) Diminished excretion of urea. (5.) Solid œdema of skin and connective tissue. (6.) Decreased size of thyroid gland.

The remarkable diminution in the amount of urea excreted by the kidneys is probably owing to the fact that the urea is not formed in the system because the tissues are not subjected to the usual wear and tear of life, heat formation is thus retarded, and there results a diminished body temperature and the subjective sensation of cold.

To account for these symptoms, in regard to which most observers are now agreed, Dr. Hadden offers as a working hypothesis, carrying with it a *primâ facie* probability, the theory of a lesion of either the vaso-constrictor or vaso-dilator filaments of the vaso-motor branch of the sympathetic system of nerves from which a condition of angiospasm supervenes, not affecting the blood-vascular system alone, but involving also the lymphatics.

Assuming a state of angiospasm universally existing, we have, Dr. Hadden thinks, a fair explanation of the main symptoms of myxœdema; as a consequence there would result diminished tissue waste and heat, together with bodily and mental sluggishness, and the atrophy of the thyroid gland may be as reasonably referred to vaso-motor spasm in myxœdema as its hypertrophy to vaso-motor paralysis in exophthalmic goitre.

Starting with such a hypothesis, the following conclusions are reached by the writer: —

(1.) That in the early stages myxœdema is essentially a disease of imperfect nutrition, dependent, probably, on generalized angiospasm.

(2.) That the solid œdematous condition of the skin and connective tissue is due to a form of lymphatic obstruction, which may also be ascribed to vaso-motor influence, and that the accumulated products undergo changes which result in the formation of mucin.

(3.) That the condition of the thyroid gland is also to be explained on the vaso-motor hypothesis.

(4.) That the more severe mental symptoms, such as insanity, occurring in the later stages of myxœdema, are due to alterations in the brain itself.

(5.) That although myxœdema is a distinct morbid entity, it is probably intimately allied to certain other disorders, such as sporadic cretinism and scleroderma.

(6.) That the solid œdema, which is universal in myxœdema, may be localized to various parts of the body, such as the tongue and extremities.

(7.) That the primary and essential lesion probably exists in the peripheral sympathetic system, and perhaps, too, in the supreme centre in the medulla oblongata, this last supposition being based on the occasional occurrence of bulbar symptoms.

◆

THE APPROPRIATIONS FOR THE NATIONAL BOARD OF HEALTH.

The Senate Committee on Appropriations in reporting the sundry civil bill added considerably to the appropriations for the National Board of Health, but these additions were stricken out upon the return of the bill to the House of Representatives, one of the members expressing himself very depreciatingly in regard to the Board, very enthusiastically of the Marine Hospital Service, and drawing a comparison between the works of the two in warding off epidemics which did but little justice to the Board of Health.

Among other things already given up by the Board, its investigation into the nature of the malarial poison, which was being carried on in Boston, has been stopped.

Apart from the cutting off of funds, the present bill provides that "hereafter the duties and investigations of the Board of Health shall be confined to the diseases of cholera, small-pox, and yellow fever."

The present Board will be seriously crippled; the evil, however, will not be without compensations if we can have a newly-organized board, not composed entirely of physicians, with new powers and resources.

◆

ARE SCHOOLS OF MEDICAL PRACTICE TO HAVE REPRESENTATIVES IN THE UNITED STATES GOVERNMENT SERVICE?

Mr. Cameron, of Pennsylvania, introduced in the National Senate a joint resolution entitled "relative to Schools of Medical Practice in the United States and the Graduates thereof," which we append. It was referred to the Committee on Civil Service and Retrenchment.

The object of the resolution is said to be to further an effort which is making to secure a representation in the government service of various medical dogmas, and especially of homœopathy. The rigid character of the examinations seems to be the greatest impedement at present to the success of "pathies:" —

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be a misdemeanor, punishable by a fine of five hundred dollars and dismissal from office, for any officer of the United States Government, civil, military, or naval, to make discrimination in favor of or against any school of medical practice, or its legal diplomas, or its duly and legally graduated members, in the examination and appointment of candidates to medical service in any of the departments of the government.

Sect. 2. That all such examinations shall be open to the attendance and witness of all physicians, citizens of the United States, and that duly-certified copies of the complete records of all the details of said examinations shall be placed on file in the office of the Librarian of Congress, subject to the inspection and use of members of Congress.

MEDICAL NOTES.

—The *Lancet* tells the old story of a practitioner of Galashiels who failed to protect himself during a surgical operation on a female by the presence of a third party, and was obliged in consequence to stand a trial for rape, which fortunately was followed by acquittal.

—Dr. John Chiene has been appointed Professor of Surgery in the University of Edinburgh, succeeding the late Professor Spence. Dr. Chiene is widely known as a surgeon and as a devoted adherent to the antiseptic doctrines.

—The *Medical Times and Gazette* contains the following interesting quotation on the importation of American pork into France. This subject of discussion, which has now continued for nearly two years, has not yet been closed. The Chambers, upon the recommendation of the sanitary authorities (for, in truth, partly in consequence of the culinary habits of the country, trichinosis has never appeared in Françe) as to precautions taken at the frontiers to ascertain that the American certificates of "fully cured" were realities, had voted the reversal of the prohibition. The protectionists in the Senate, however, setting themselves up as the guardians of public health, have refused by a slight majority, to pass the law. The pork is nevertheless bought in an underhand way, and is consumed in Paris without any ill effect.— *Gaz. Hebd.*, July 7.

MEDICO-LEGAL NOTE.

IN a recent suit for malpractice brought against Dr. David Clark, of Springfield, Massachusetts, the defendant was substantially supported in his method of treatment by six or seven of the local profession on the witness stand, all of whom except one also indorsed the results obtained, and he himself testified to the intoxication of the patient, who threw off the bandages at a critical stage of the treatment. Notwithstanding the testimony the jury was divided, and stood seven for the defendant to five against, then eight to four, and finally seven to five. The five jurors are reported to have considered rather the question of the merits of doctors in general than the evidence introduced in the trial.

Miscellany.

LETTER FROM WASHINGTON.

WASHINGTON, D. C., *August.*

MR. EDITOR,—After an absence of some weeks from this city with a patient in quest of health among our lakes and Her Majesty's maritime provinces, your correspondent returns to find that much has occurred worthy of note among his medical brethren, and, accordingly, with the influence of the briny still upon him, feels disposed to spin a long yarn, upon which you, in your judgment as an editor, may use the scissors before its close.

First, let me say, that however lovely we found the lakes, however charming were the places along their banks for fishing, boating, and camping out to the wearied city resident with a good use still of his muscles, to the listless, apathetic invalid there was something wanting,—it was the vigor which salt air brings to so many. To be on those vast bodies of water without the salt air, and without the look of the sea,—for say what you please, the lakes do not look like the sea,—was disappointing. Accordingly, the contrast on reaching the Gulf of St. Lawrence was very striking, and it is surprising that comparatively so few of our invalids know, for instance, of the charms of the Gaspé region, with its bold scenery, its abundance of fish, and its readiness of access. To be sure, the luxuries of life are few, but the necessities of life, and many of its luxuries, can be readily taken there by proper management. We found Prince Edward's Island and Halifax well known and appreciated by those in search of summer resorts; of Prince Edward's Island we did not see the great advantage, while Halifax must be a delightful place in which to pass the summer. We found the medical men there on the alert for all that is new in medicine and surgery; the ovariotomy wave has reached them, and three successful cases so far are among their surgical triumphs. We found three Bellevue Hospital men, two of whom were old chums whom we were very glad to meet. Why is it that our hospitals, particularly those of an age covering the years that do Bellevue and some others, do not attempt to keep up and perpetuate these staff memories. We have college class days for our literary colleges, and there are alumni and class associations for our medical colleges, but our classes are so large in these times that while we take an interest in a man who was in our class, we know but little of many of the Toms, Dicks, and Harrys, who may have been of our date. In hospital service it is far different. We receive the memories of the giants (whales, Dr. C. R. Gilman would say if he were alive) that preceded us with reverence, learn to respect each other's capabilities, and in turn leave something behind us for our successors to respect. We form friendships in a hospital term of eighteen months, or two years as it was in my time, that deserve to be kept alive, and if any Bellevue man reads this sympathetically, your correspondent is ready to act with him in any way that may bring about so desirable an end.

The colleges here have already issued their circulars for next winter's campaign. In the National Medical College, owing to the absence in Europe of Dr. J. Ford Thompson, Dr. John B. Hamilton, Surgeon-General of the Marine Hospital Service, will, as lecturer, fill the chair of surgery; and in the Georgetown Medical College, Dr. Antisell having resigned, Dr. Ellzey fills his place as professor of chemistry. These colleges are both of them very much crippled in their usefulness by the want of proper clinical advantages, Providence Hospital, the only general hospital here which was ever available for the purpose by the faculties of the two colleges, having virtually closed its doors by the action of the Sisters of Charity in charge in removing, or causing the removal of, the old staff and the appointment of a new one whose interests were not identified with those of the colleges. It is true some of the new staff have offered to give clinical instruction, but it is hard for men not identified with college interests to establish systematic instruction of that character. Its doors, however, have been opened a little by the appointment on the attending staff of Dr. Joseph Taber Johnson, Professor of Obstetrics, Georgetown Medical College. Dr. Johnson at the time expressed himself as in sympathy with the staff which was so summarily ousted, but of course must have good and sufficient reasons for taking a place made vacant by such action.

The Garfield Memorial Hospital, which, if successful, would supply in great part this want of clinical material, is not having everything its own way. After the refusal of Congress to grant an act of incorporation, the ladies were induced to work for it. The rotunda of the Capitol was by them turned into a great bazaar, and they succeeded in raising money. Then it was found that there was a homœopathic element that wanted a say in the management of the hospital; this spirit was laid by good management, and a circular was issued, signed by some eighty-five names of resident practitioners, calling for aid in establishing the hospital. It was necessary to go to Congress again, which, after the reception previously met with, was not an agreeable anticipation; but this time it was for the purpose of obtaining authority to enable the trustees of the Soldiers' and Sailors' Orphan Asylum to turn over their interest in that property to the hospital in question. After considerable discussion this was granted by the House of Representatives, and by a large vote, 69 to 22; it will now have to go before the Senate, and it is feared it will not be reached by that body during the present session. The discussion in the House on granting this authority brought out some facts of interest to the friends of the hospital. Decided opposition having been met with in the course of the attempts to legislate the hospital into existence, it was felt that there were certain parties working strenuously against its passage, and inferences were made as to who they might be. Mr. Blount, of Ohio, in arguing that there was no necessity for such a hospital, had a statement read to support his views, signed by some twenty-six practitioners, thus giving explicitly the objections and names of the objectors. It simply contradicts the circular, but its contradiction does not seem to weaken the facts; it is merely assuming a different line of argument from the same premises. The circular avers "that there is no hospital in this District into which a deserving poor white man or woman, unless she is afflicted with some disease peculiar to her sex, can find accommodations except upon payment of a weekly board, or submit to conditions which should not be imposed upon that class." The denial recommends the following general hospitals, of course the only ones which could be considered under this clause: "The Almshouse Hospital accommodates a class that drifts into such institutions." The deserving poor certainly cannot come under that head. "The Freedman's Hospital is 'mainly a hospital for the sick of the African race,' but is open to white patients, and is satisfactorily fulfilling its mission," but while its mission is to obtain the best medical care and most comfortable accommodations for the sick of the African race, it is certainly *not* its mission to outrage the prejudices of a large class of our resident white population, and compel them to use the hospital from the necessities of poverty. Lastly, and evidently of the most importance, as it has a separate paragraph to itself, to repeat what went before, in Providence Hospital, under the charge of the Sisters of Charity, we are told "resident paupers are admitted at the request of the sanitary officer of the metropolitan police, a request that is never refused." That is to say, a medical man having a patient requiring hospital care that is too poor to pay for it may hunt up a sanitary police officer, and, obtaining his request, may send his patient to the Providence Hospital, trusting to the will of the Sister in charge, and to the statement of these medical gentlemen that admittance has never been refused. Certainly, the circular does not exaggerate when it says these are "conditions which should not be imposed upon that class." There is no law here, no right to demand admission; it is pure charity, exercised at will by representatives of a religious denomination which many of the recipients of that charity are not in sympathy with. As to the will of the Sister in charge, there is no doubt but what she has it and exercises it; and some of the gentlemen who felt its force on being removed by her from the attending staff recognize it accordingly as a one-will power. The signatures to this statement seem in the main to be made up of the present staff of the Providence Hospital and their friends. Two of these names are of men who were supposed to be directly interested in the Garfield Memorial Hospital, one of them having been on an important committee and attending several important committee meetings.

There is one paragraph, however, in this circular of the Garfield Memorial Hospital which mars its force and usefulness. Your correspondent's signature is attached to the circular, but if he had read this paragraph carefully and appreciated its application it is more than doubtful as to whether his signature would have been there to the paragraph as it now stands. It is simply a statement that this great want of proper hospital accommodation exists, notwithstanding the annual expenditure of seventy thousand dollars in support of hospitals. "A large part of this sum is disbursed in payment of large salaries (Freedmen's and Columbia Hospitals) to the medical officers." It may be true that a large part of this sum is disbursed in payment of salaries, but they are not large salaries, and there is no one of these medical officers but deserves all he gets, and it ought to be a matter of congratulation that he does get it. It is not too often that medical men get more than their pecuniary dues, and especially at this time the inference of that paragraph does not come with a very good grace. Let our politicians and members of Congress, — many of them lawyers who secure to themselves fat retaining fees before undertaking *their* cases, — let them discuss this matter to their heart's content, the quiet dignity of the profession and the medical press in laying aside all other issues and refraining from comment upon the discussion which questions the propriety of any sum, however large, being allowed to Garfield's physicians shows how well we can control ourselves. Why would it not be a good plan to institute a retaining fee in cases of importance other than those of obstetrics, where it has already been inaugurated. Are there not many instances where a patient recognizes the right of his physician to receive a suitable fee, and where at his death, for want of legal proof, the executor cuts down his bill to a mere stipend. The discussion in Congress over the payment of the fees of Garfield's physicians is simply disgraceful, and it will do no good to review it, except, perhaps, to the future physicians who are to attend some of these gentlemen that they may adopt the European plan, and take their fees at each visit.

This naturally leads to the consideration of the Guiteau autopsy. What a curious ending to this remarkable case, take it all in all; the treatment of Garfield, the autopsy, the treatment of his physicians, the trial of Guiteau, and his autopsy, each and all make us think, would that it were behind us and forgotten as much as possible. There are some points about the Guiteau case upon which your correspondent desires more light, being absent at the time. We know all about the minority and majority reports. We know from the statements made in print, and almost everybody concerned seemed to have rushed into print, that the brain was thoroughly drained of its blood before it was examined, and we know that the Rev. Dr. Hicks knows how to write vigorous and forcible English, and that his threat to himself act as assistant might not, from his own showing, have been a bad idea after all. But now that the excitement is all over, might not those doctors concerned in the making of the autopsy go further than to give us the bare facts in the case; let them tell us wherein the brain differed from, and bore resemblance to, both in general contour and microscopical appearance, other brains of cases of insanity examined by them; and what was Dr. Loring looking for in the eyes of a man dead from strangulation or pressure upon the medulla. Was it choked disk or papillitis that he saw when Guiteau was living, or that he was looking for, and what additional proofs one way or the other did he expect to find under the circumstances. We take it that there are others as ignorant, to whom answers to these questions would be valuable and interesting.

So the American Medical Association refused to admit the New York doctors. Well, it has stirred up the homœopaths, for one thing, to an increased sense of their importance, at least judging from a bill recently introduced into Congress, in the Senate July 14th by Mr. Cameron, and in the House July 17th by Mr. O'Neill. It is in the form of a joint resolution relative to schools of medical practice in the United States and the graduates thereof, and resolves "That it shall be a misdemeanor, punishable by a fine of five hundred dollars and dismissal from office, for any officer of the United States government, civil, military, or naval, to make discrimination in favor of or against any school of medical practice, or its legal diplomas, or its duly and legally graduated members, in the examination and appointment of candidates to medical service in any of the departments of the government.

"Sect. 2. That all such examinations shall be open to the attendance and witness of all physicians, citizens of the United States, and that duly certified copies of the complete records of all the details of said examinations shall be placed on file in the office of the Librarian of Congress, subject to the inspection and use of members of Congress."

What in the world does all this mean? is the first thought, but the answer is not far to seek. The *Hahnemannian Monthly*, of Philadelphia, for July, tells the whole story in its editorial. It seems that Dr. John C. Morgan, as chairman of the Committee on Legislation of the American Institute of Homœopathy, addressed a letter to the War and Navy Departments, —through Mr. O'Neill, — of which the following is an abstract: "Will you kindly inform me, *first*, if the Honorable Secretary of the Navy authorizes a discrimination between the diplomas of homœopathic medical colleges, in good legal standing, and those of the allopathic, or so-called 'regular' school, in the admission of candidates to examination for the medical corps of the Navy. *Second*, if a graduate of a 'regular' medical college, who shall avow himself an adherent of homœopathy, will be admitted to examination and appointment on proving himself to be possessed of the requisite amount of knowledge."

The answers came, and will be given further on. The editor leaves to itself the carefully-worded and diplomatic reply from the Navy Department, but he takes the bold and squarely-put answers from the War Department, and expends his force upon the latter, concluding that "we shall not be greatly surprised, ere long, to 'hear it thunder all around the sky.'"

We give an abstract from the answer of the Navy Department, which is signed by W. E. Chandler, Secretary of the Navy: —

"I beg leave to say that the matter was referred to the Chief of the Bureau of Medicine and Surgery, who reports that no discrimination is made in favor of or against any school. The only requirements of the department are that a candidate, in addition to his moral and physical qualifications, shall possess the necessary professional and literary knowledge to enable him to pass the established examination."

In the following is also the substance of the letters from the War Department, signed J. K. Barnes, Surgeon General United States Army: —

"April 24th. The term 'regular' as applied to a medical school, has no relation to its legal standing, but indicates that its teachings are not confined to the particular doctrines of any sect. It does not, for instance, apply to a school which professes to teach homœopathy or botanic medicine only.

"The knowledge which a medical officer of the army should possess to enable him to properly discharge the important and responsible duties which devolve upon him, and to make use of the means of treatment which are provided by the department, can only be obtained at a regular medical school, and it is not considered worth while to waste the time of the Army Medical Examining Boards or to induce young men to incur useless expense by extending invitations to appear before such boards to those who cannot furnish evidence that they have at least had an opportunity to obtain the knowledge required."

Again: —

"May 10th. I have the honor . . . to state that it is not considered desirable to introduce in the army the practice of homœopathy, hydropathy, botanicism, physico-medicalism, or any other sectarian and exclusive system of medicine.

"The fact that a candidate has a knowledge of the dogmas of any or all of these systems would be no bar to his admission to the Medical Corps of the Army, but the fact that he *avowed* his adhesion to some one of these would indicate that he is not suited to the position of medical officer, nor in my opinion would he be acceptable to a large majority of those for whom medical attendance is provided by the government."

The editor (Hahnemannian) thinks this "is sufficiently definite and emphatic." So do we.

Writing of the Surgeon General's Office, United States Army, reminds us that considerable discussion has taken place in Congress regarding the Pension Records. It seems that they require to be removed to a safer place than where they are at present, and to a place more commodious for the force of clerks necessary to be employed upon them. It is proposed to put them all directly under the charge of the Adjutant General of the United States Army. As this would reduce the Surgeon General's Office to very small proportions, and undoubtedly cripple the resources of that office for continuing much of its valuable and important work, it becomes a serious question, which is not yet decided, but it is presumed that the very worst that could happen would be to consolidate the two sets of records in one building and in one general office, and to detail a medical officer of the army to supervise the management of the hospital files, etc., of the pension records. In such an event the work would practically still be under the control of the Surgeon General's Office.

The National Board of Health is faring badly this session, and the fact comes home to us forcibly when we find the publication of its valuable *Bulletin* suspended for want of funds, and now we find that hereafter its duties and investigations are to be confined to yellow fever and cholera. The appropriation for publishing the *Bulletin*, which at its lowest estimate should be $9,500, has been put at $5,000,— fortunately the appropriation for the clerical force has finally been adopted by the Senate at very nearly the amount required, but still sufficiently below the proper figure to materially interfere with the workings of the Board. The discussion in the House showed plainly that local commercial interests which resisted the rigid quarantine necessary to prevent the spread of disease, and which would naturally be exercised by an independent power, that these interests were too great in their influence for the friends of the Board in Congress. The news comes to us through the daily press of the last day or two, that small-pox is prevailing in Baltimore to an alarming extent, and that it is feared it cannot be kept within bounds. An unfortunate coninincidence, occurring as it does with such action as this.

We still believe the Potomac flats have been legislated out of existence by the appropriation for their reclamation; the veto of the President, with his practical and sensible message, was like hope deferred which maketh the heart sick. The discussion on the subject in Congress was on the commercial value of the undertaking — no commerce, no advantage; the unhealthiness of the city from such a cause was denied, and indeed the arguments brought forth were very convincing. Mr. Blount, for instance, showed by statistics that Washington was one of the healthiest cities in this country, and considered the statement a fraud that Garfield's health was affected from such causes by his remaining here after receiving his wound. The fact that a new President's house is about to be built, just behind the location of the present one, and of course more than ever subject to the influence of these flats, with the approval of the President and Congress, speaks quite as strongly against the dread of malaria, as the debate in Congress itself.

Do away with the bugbear of malaria and our neighbors have only our dreadful heat to complain of. The heat of the past two weeks has been far more bearable here during the day time than anywhere on the coast line from Portland to Boston. Believe one who has tried it.

Congress has appropriated one thousand dollars for publishing a history of, and all necessary information concerning, the Society of the Red Cross, the United States having recently joined the Geneva Convention, and a national Society having been established here with Miss Barton as the President. W. L.

INFECTION BY RAGS.

Many years ago the writer attended a public institution to which were brought a number of cases of small-pox. The patients were put into a loft high above other inmates and segregated as much as possible.

One evening an errand boy was allowed to wait in the basement of the institution while a message was prepared for him. He returned at once to his home, miles away. About a fortnight after this a woman at the boy's house fell ill of small-pox, which proved fatal.

It was immediately proclaimed that the boy had carried the disease from the institution to the woman. Popular excitement soon became fearful. The officers of the institution were belabored without stint, and threatened. The selectmen of the town were called upon to institute proceedings. It was a long time before the neighborhood was fully quieted, and there are now, or were quite recently, persons there who passionately refer to the case as one of homicidal negligence.

Twenty or more years afterward the truth of the matter came out, by the merest accident; and it appeared that, on the night the boy visited the institution, a man, already broken out with varioloid, and who was subsequently admitted into the institution for that disease, came to the woman's apartments, occupied her bed, and she slept with him!

Here is a good illustration of the cases of disease alleged to have been transmitted by rags, old garments, and the like. The whole truth is rarely ever brought to light in such cases. There is apt to be a man in them.

There seems no end to infallible instances — almost every one has his sure case — supported by evidence as good as and no better than originally in that related above, and set forth with an assurance that admits of no appeal. But truth is often evasive, sometimes past finding out; circumstances are frequently nebulous, occasionally misleading; motives for concealment of facts now and then there may be stronger than the fear of future punishment; adequate investigation at times proves difficult, rarely unprejudiced; while an unwarranted conclusion, if sensational, satisfies the crowd, and possibly the expert, better than a confession of ignorance.

There is hope, however, in the future. Recent authorities become less positive. One of the latest[1] admits that cases of such infection are "not very frequent;" and seems to have less confidence in laws to enforce "disinfection" or to punish transfers of infected articles. The difficulty in finding a culprit who knows of a real disinfectant, or who can tell whether a given sample of goods is infected or not, is more readily ackowledged than formerly.

We disbelieve in the boy! M.

◆

TREATMENT OF IRREGULAR HEART IN PULMONARY CONSUMPTION.

In a number of cases of incipient lung disease, I have been struck with tendency to attacks of palpitation and irregular overaction of the heart; and I have more than once traced a congestion of the lungs to this cause. I believe that it occurs more frequently in young men than in women, and appears sometimes to be connected with the use of tobacco. In some cases I have noticed an idiosyncrasy with regard to tobacco. Where there is some hypertrophy, the use of the bromide of potassium (especially in combination with a narcotic, such as chloral or morphia, in order to induce sleep) is serviceable. When the heart is weak and the circulation languid, a cardiac tonic like digitalis, quinia, boldo, or viscum album will prove necessary; but veratrum viride will be required if hypertrophy be marked. It is in the condition of failing circulation that a small amount of alcohol in a hot drink is often of great service. I am strongly of the opinion that stimulants, so-called, are out of place in a chronic degenerative disorder like this under consideration, and I believe that cases of consumption reported by Flint and others as cured by large quantities of alcoholic liquors really recovered in spite of the heroic doses prescribed rather than on account of them; for we do not forget the fact that in all these cases alcohol is never the sole treatment, but the greatest attention is paid to general hygiene. Alcohol is really contra-indicated in phthisis pulmonalis, as far as the state of the respiratory apparatus is concerned; but small amounts given guardedly, I believe, may yield more than a temporary benefit from their action upon the stomach and the heart. Probably the best (because most lasting) stimulant for these cases is the fluid extract of coca (one half to one drachm), which promptly exerts a marked effect. A bowl of meat-broth, of *bouillon*, or of hot coffee (containing an egg beaten up with cream), or even a cup of tea, is often much more serviceable to the patient than hot whiskey. When a patient feels chilly, exercise in the open air, on horseback, or walking, will often quickly restore him to warmth when a hot fire and extra clothing fail to make him comfortable. Food and exercise in the fresh air are physiological stimulants to the heart and circulation that deserve the highest appreciation, and this fact is well recognized in the various resorts for the out-of-door treatment of phthisis. Where the heart is weak and irregular, the use of digitalis in combination with quinia and a small amount of opium, in the form so highly praised by Niemeyer (quinia, two grains; pulverized digitalis, one third of a grain; pulverized opii, one quarter of a grain), given three or four times daily, has stood the test of experience; but in all such cases it is important to bear in mind that uninterrupted rest of seven or eight hours at night is a better general tonic than any remedy in the Pharmacopœia. — DR. FRANK WOODBURY on the Rational Treatment of Pulmonary Consumption — in the *Philadelphia Medical Times*.

---

[1] Boston Medical and Surgical Journal, July 27, 1882.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 29, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York	1,206,590	1217	769	53.16	4.46	43.88	2.63	.49
Philadelphia	846,984	314	540	12.40	—	—	5.72	2.54
Brooklyn	566,689	603	402	—	—	—	—	—
Chicago	503,304	371	275	49.05	3.50	34.49	1.35	1.62
Boston	362,535	265	165	51.14	3.76	45.12	1.40	1.40
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	192	103	44.72	2.08	28.08	5.20	3.12
Cincinnati	255,708	151	67	41.71	6.62	14.56	1.99	4.63
New Orleans	216,140	111	33	—	—	—	—	—
District of Columbia	177,638	91	6	41.72	3.29	24.95	—	2.20
Pittsburgh	156,381	128	80	47.18	3.90	30.42	3.12	2.34
Buffalo	155,137	101	64	44.55	1.98	30.69	.99	—
Milwaukee	115,578	65	41	21.41	10.70	15.38	1.54	1.54
Providence	104,857	58	37	48.27	5.17	44.82	3.45	—
New Haven	62,882	37	23	8.11	5.40	—	2.70	—
Charleston	49,999	23	7	26.08	—	4.35	—	8.69
Nashville	43,461	29	8	38.93	3.45	34.48	—	3.45
Lowell	59,485	50	34	50.00	4.00	44.00	6.00	2.00
Worcester	58,295	63	48	65.98	6.28	40.85	1.57	1.57
Cambridge	52,740	22	12	59.09	—	45.45	—	4.55
Fall River	49,006	36	15	88.86	—	86.09	—	—
Lawrence	39,178	30	23	66.66	—	26.64	—	—
Lynn	38,284	11	4	36.36	9.19	36.36	—	—
Springfield	33,340	20	9	50.00	—	45.00	—	—
Salem	27,598	29	12	13.79	—	6.89	—	3.44
New Bedford	26,875	9	0	44.44	—	33.33	—	—
Somerville	24,985	19	13	63.12	5.26	63.12	—	—
Holyoke	21,851	19	0	73.64	—	47.37	5.26	5.26
Chelsea	21,785	13	7	7.69	—	7.69	—	—
Taunton	21,213	7	2	—	—	—	—	—
Gloucester	19,329	7	3	—	—	—	—	—
Haverhill	18,475	6	2	33.33	—	16.66	—	16.66
Newton	16,995	5	3	40.00	—	40.00	—	—
Brockton	13,608	—	—	—	—	—	—	—
Newburyport	13,537	3	0	33.33	—	—	—	—
Fitchburg	12,405	2	0	—	—	—	—	—
Malden	12,017	6	4	33.33	—	33.33	—	—
Twenty Massachusetts towns	155,560	46	20	28.21	—	15.19	2.17	2.17

Deaths reported 4285 (no report from St. Louis): 2637 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1884, consumption 362, lung diseases 143, diarrhœal diseases 1484, diphtheria and croup 98, scarlet fever 57, typhoid fever 55, whooping-cough 51, small-pox 37, measles 29, cerebro-spinal meningitis 26, malarial fever 24, puerperal fever 18, erysipelas six. From *scarlet fever*, New York 16, Brooklyn 14, Philadelphia and Cincinnati seven each, Buffalo five, Baltimore two, District of Columbia, Pittsburgh, Milwaukee, New Haven, Charleston, and Cambridge one each. From *whooping-cough*, New York 19, Pittsburgh six, Brooklyn 10, Chicago and Boston four each, Buffalo two, Philadelphia, Baltimore, Cincinnati, District of Columbia, Cambridge, and Fall River one each. From *small-pox*, Cincinnati 21, Baltimore eight, New York three, Philadelphia and Chicago two each, Pittsburgh one. From *measles*, New York 11, Pittsburgh six, Chicago three, Boston, Baltimore, Buffalo, and Worcester two each, Lawrence one. From *cerebro-spinal meningitis*, New York five, Philadelphia, Chicago, Buffalo, Holyoke, and Peabody two each, Baltimore, District of Columbia, Pittsburgh, Milwaukee, Charleston, Worcester, Lawrence, Springfield, Salem, New Bedford, and Waltham one each. From *malarial fever*, New York 12, District of Columbia seven, Baltimore two, Cincinnati, New Haven, and Charleston one each. From *puerperal fever*, New York nine, Boston, Buffalo, and Milwaukee two each, Cincinnati one. From *erysipelas*, Chicago two, Philadelphia, District of Columbia, Worcester, and Holyoke one each.

Sixty-one cases of small-pox were reported in Cincinnati, Baltimore 25, Buffalo two, Pittsburgh and Nashville each one; diphtheria 12, scarlet fever six, typhoid fever seven, in Boston; scarlet fever three, and diphtheria one in Milwaukee.

In 39 cities and towns of Massachusetts, with a population of 1,052,148 (population of the State 1,783,086), the total death-rate for the week was 32.02, against 21 and 19.87 for the previous two weeks.

For the week ending July 8th, in 173 German cities and towns, with an estimated population of 8,521,145, the death-rate was 27. Deaths reported 4419: under five 2461; consumption 517, lung diseases 396, diarrhœal diseases 353, diphtheria and croup 159, scarlet fever 93, measles and rötheln 50, typhoid fever 38, puerperal fever 12, small-pox (Beuthen, four, Koblenz two, Königsberg, Königshutte, and Munich one each) nine, typhus fever (Danzig, Breslau, Posen, and Beuthen one each) four. The death-rates ranged from 16 in Karlsruhe to 37.3 in Breslau; Königsberg 29.1; Breslau 37.3; Munich 26.9; Dresden 24.3; Berlin 35; Leipzig 26; Hamburg 25.6; Cologne 27.3; Frankfort a. M. 18.3; Strasburg 22.9.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending July 15th, the death-rate was 19.2. Deaths reported 3121: acute diseases of the respiratory organs (London) 199, diarrhœa 218, whooping-cough 112, measles 83, scarlet fever 57, fever 44, diphtheria 12, small-pox (London four) 10. The death-rates ranged from 14.1 in Norwich to 26 in Leicester; Sheffield 15.6; Bristol 17.1; London 18.1; Birkenhead 19.9; Leeds 21; Sunderland 22.3; Manchester 23; Liverpool 25.1. In Edinburgh 15.7; Glasgow 22.5; Dublin 16.8.

For the week ending July 15th, in the Swiss towns, population 494,390, there were 31 deaths from consumption, diarrhœal diseases 26, acute diseases of the respiratory organs 13, diphtheria and croup five, scarlet fever three, typhoid fever two, measles one. The death-rates were, at Geneva 12.3; Zurich 10.1; Basle 19.6; Berne 31.

The meteorological record for the week ending July 29th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1882.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	8.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 23	30.031	74	88	62	63	34	63	53	W	W	W	6	4	5	C	F	C	—	—
Mon., 24	29.974	79	95	67	61	27	58	49	W	W	W	11	8	6	C	C	C	—	—
Tues., 25	30.037	81	96	69	64	28	56	49	W	W	W	5	12	10	C	F	C	—	—
Wed., 26	29.996	82	95	71	60	24	56	47	W	W	W	6	12	6	C	C	C	—	—
Thurs., 27	29.943	79	98	68	58	26	84	56	W	W	NW	4	2	9	C	F	O	—	—
Fri., 28	29.884	70	82	65	100	84	84	89	SE	E	W	4	4	8	G	O	O	—	—
Sat., 29	29.911	78	92	69	79	35	63	59	W	W	NW	6	8	10	F	F	C	—	—
Means, the week.	29.968	78	98	62				58										2.50	.61

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 29, 1882, TO AUGUST 4, 1882.

Munn, C. E., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for two months' extension, when relieved by Acting Assistant Surgeon T. H. Pleasants. S. O. 147, Department of the Missouri, July 28, 1882.

Hopkins, W. E., first lieutenant and assistant surgeon. To proceed from Fort Adams, R. I., to Camp Washington, Gaithesburg, Md., and report to the commanding officer for duty. S. O. 132, Department of the East, July 31, 1882.

Books and Pamphlets Received. — Der Uranismus. Lösung eines Mehrtausendjährigen Räthsels von W. Bernhardi. Berlin: 1882. Verlag der Volksbuchhandlung. (Bernhardi.)

A Rational Materialistic Definition of Insanity and Imbecility, with the Medical Jurisprudence of Legal Criminality, founded upon Physiological, Psychological, and Clinical Observations. By Henry Howard, M. R. C. S. Eng., for the last twenty-two years connected with Asylums for the Treatment of the Insane, etc. Montreal: Dawson Brothers. 1882.

La Lithotritie doit être faite sans traumatisme. Par le Dr. Reliquet, Lauréat de l'Institut. Extrait de la Gazette des Hôpitaux.

Annual Announcement. Memphis Hospital Medical College and Medical Department of Southwestern Baptist University.

Extensive Ravages from Lupus, with Subsequent Cicatrization, leaving but one Small Hole in the Face, which represents both Mouth and Nose, and with complete Closure of the Anterior Nasal Orifices. By Julian J. Chisolm, M. D. Baltimore, Md.

Thirty-Ninth Annual Report of the Managers of the State Lunatic Asylum, Utica, N. Y., for the Year 1881.

American Ovariotomies. By Horatio R. Bigelow, M. D., Washington, D. C. (Reprint.)

Fourteenth Annual Report of the President of the Inebriates' Home, Fort Hamilton, N. Y., for the Year 1881. Also a Statistical Report of Six Hundred Cases of Alcoholic Inebriety treated at the Inebriates' Home from November, 1879, to January 1, 1881. By Lewis D. Mason, M. D., Consulting Physician to the Inebriates' Home. Fort Hamilton: Printed at the Inebriates' Home.

Original Articles.

THE ROUTINE TREATMENT OF VENEREAL DISEASES.[1]

F. B. GREENOUGH, M. D.

THE subject of venereal disease is not a savory one in this community. We have in this respect, as in some others, inherited from our Puritan ancestors the tendency to get over an unpleasant fact or problem by simply ignoring it. But venereal disease is one of those facts in modern civilized life that cannot be ignored, and sooner or later must be admitted as an existing evil, and combated with the weapons which medical and social science have placed in our hands. There can be no doubt that this evil is an increasing one; what with the greater laxity of morals of the present day, the large influx of a foreign element and consequently of foreign habits, the increased cost of the necessities of life and the considering as necessities what used to be luxuries, — thus preventing a large number of ambitious young men, whose parents have been able to give them the advantages of an education which opens to them the field of a professional, literary, or artistic life, from marrying, — there can be no doubt, I say, that at the present time illicit sexual intercourse is much more common than it was forty or fifty years ago, and as a matter of course its concomitant evil, venereal disease, also. But however important the subject of venereal disease may be to the welfare of the community, it has the additional claim to the attention of the medical profession of being one of the most wonderful and interesting chapters in the whole book of pathological science. What can be more extraordinary than the history of syphilis? Here is a disease which appeared spontaneously four or five centuries ago, which is acquired by the absorption of an infinitesimal amount of an unknown entity which we call virus. This results in a series of pathological manifestations which follow each other with as much regularity and certainty as is the case when a seed is sown and we have a plant develop which goes through the processes of growth, flower, fruit, and seed. Within a certain quite definitely marked limit of time after the absorption of the virus, we find the cutis or mucous membrane at the point of entrance breaking down, and around this point an increase of connective tissue takes place, producing the well-known induration. After another equally defined period, constitutional symptoms of a febrile nature appear; and these are accompanied by inflammatory processes of the skin and mucous membranes, — the former appearing as an eruption which may run through the whole sequence from simple erythema through the papular and pustular to the ulceration stage, and the latter as lesions from the simple abrasion on the inner lips to that form of papillary hypertrophy on the tongue, tonsils, or about the anus, which we call a mucous patch. This same inflammatory process may affect the periosteum or the iris. During this period we find the lymphatic glands enlarged, at first those especially in the vicinity of the point of entrance of the contagion; later, others are affected; still later, if the disease is not checked, we find a new and more serious set of symptoms. Neoplasms, gummy tumors, are found in the skin, bones, brain, or internal organs, which break down, forming large abscesses, and destroying large portions of the tissues in which they happen to exist. Not only is the individual affected by this series of symptoms, but the disease is transmitted to his posterity. That a disease such as is thus most hurriedly and incompletely sketched should attract the attention of the followers of medicine is not to be wondered at, and, in fact, some of the best minds of the students and investigators who have preceded us have devoted much time and attention to the subject. Until a comparatively recent time, however, the matter was involved in much confusion and uncertainty; the other two affections which, with syphilis, are classed as venereal diseases, that is, gonorrhœa and the local venereal ulcer or chancroid, — the latter more especially, — being for some time mixed up and confounded with the new disease. From our present point of view it seems hardly credible that such should have been the case; but it was only after years of careful and patient investigation and experiment that the French syphilographers, headed by Ricord, could force the truth of the existence of dualism to be accepted generally. To give even an abstract of the most important points in this controversy would carry this paper far beyond its proper limits; therefore I will merely say that at the present time it is all but universally admitted, — most certainly so by all accepted as authority, — that syphilis is entirely a separate and distinct disease from the local ulcerations which we call chancroids. Probably most practitioners would admit this theoretically, but practically, as far as treatment goes, it is almost the rule to confound them together, and as this is one of the forms of routine treatment that I want most earnestly to protest against, I must beg your indulgence for a few words on the subject of differential diagnosis.

The only points in common between syphilis and the chancroid are, first, that they both are acquired by the absorption of the contagion-bearing element, that is, the virus, — generally, but by no means necessarily so, during the act of coitus; and, second, that in certain cases, for a certain space of time, it is difficult, in fact sometimes impossible, to say whether the lesion we see is a primary syphilitic one or a chancroid. Outside of these two points, and the first one is certainly of no importance, the two affections are as different and distinct as variola and acne. In this connection, then, we have only to do with the primary lesion of syphilis as being possibly mistaken for a chancroid, or *vice versa*, and it is only during a certain period of the life of the former that any doubt can be possible. Time will therefore settle the question, even in the most puzzling cases. The period of incubation of the primary lesion is comparatively a long one, from ten days up to twenty or even thirty. It appears at first as a papule; is usually single; the surface becomes abraded, exuding a serous rather than a purulent secretion; the inguinal glands on both sides become enlarged; if the lesion is a large one, one of the chain may be larger than the rest, but even this is not inflamed or very tender. On the other hand, the chancroid shows itself soon after contagion, from two or three days to a week. Its first stage is that of a pustule, the roof of which, breaking down, leaves a round or oval ulcer. This ulceration is deeper, its borders looking punched out; the base is of a dirty-yellowish pultaceous character; and the secretion is abundant, and consists of creamy pus. The lesions, also, are very apt to be multiple. There is no surrounding induration, the inguinal reaction is confined to one side, and one gland only on that side is affected. The enlargement of this gland is greater, more acute, and is due to one of two processes. It is either sympathetic, that is, due to the inflamed condition of the tissues at the seat of the chancroid, exactly as we find a gland in the axilla enlarged and tender after a bruise or irritated sore on the hand, and in this case it may or may not go on to suppuration, or it is due to the actual transmission of the chancroidal virus along the lymphatic vessels until it is arrested at the first gland; and in this case it must of necessity result in the formation of a focus of pus in the gland, which pus has all the properties of that secreted from the base of the chancroid, and on inoculation reproduces a chancroid.

---

[1] Read before the Surgical Section of the Suffolk District Medical Society, May 20, 1882.

These certainly are two very different pictures, and one would suppose that there could not be much difficulty in distinguishing one from the other, but practically this is not always the case. In the first place it is often next to impossible to get any reliable information as to the period of incubation; it is extremely rare that the lesion is seen at an early stage of its existence, that is, early enough to be able to determine whether it began as a papule or as a pustule. On the other hand, it is very likely to be seen before the characteristic induration of the lesion itself and the subacute enlargement of the inguinal glands could have developed, supposing it to be syphilitic. Or very possibly it may have been touched up with nitrate of silver, or blue-stone, or some more active caustic, causing an amount of inflammatory induration which, when seen for the first time, cannot be told from the specific induration of syphilis. Again, during the first two or three days of the appearance of multiple chancroids, the lesions themselves cannot be distinguished from a crop of vesicles due to simple herpes progenitalis. In short, the fact is that however distinct and different these diseases are, not unfrequently it is absolutely impossible at the time of the first examination to give a positive diagnosis. It is a matter of vital importance to the patient's welfare and peace of mind to be able to make this diagnosis. The difference between having a local sore which at worst may result in a suppurating bubo, and being in for an attack of syphilis is very great, and we should most certainly avail ourselves of all means in our power to get at the desired knowledge, and *a fortiori* avoid doing anything which would impede or obstruct as early a decision as possible. And yet this is exactly what is done in a very large proportion of cases of venereal sores.

As a rule, the ulcerations are either irritated with nitrate of silver, or cauterized with some more powerful caustic, and the patient is immediately put upon a course of mercury or iodide of potash, or a combination of the two, according to the fact of his adviser's having definite ideas as to the greater value of the two drugs, or his being doubtful and wanting to make sure by combining them. Now this is not only irrational, as it is undertaking a course of treatment without having diagnosticated the disease, but what is of much more importance, it is positively injurious and unfair to the patient. It is done, of course, under the supposition that the lesion will, or may be, followed by constitutional symptoms, and that by using specific treatment at once those symptoms may be modified or prevented. If there is one thing that is settled by observation and experience it is that syphilis cannot be aborted by treatment: that is to say, if we have a primary syphilitic lesion which is simply the notice put out to show that the syphilitic virus has been absorbed at that point, no amount of specific treatment will prevent the constitutional or secondary symptoms from showing themselves; but it may retard their appearance, and interfere with the regular sequence of symptoms which we observe in a typical case. It is an established fact that a primary syphilitic lesion will be followed by secondary symptoms, probably within three months, and certainly within six; and the reverse holds true, that if a sore is not followed by constitutional symptoms within these limits of time, it could not have been a syphilitic one; but if the patient has been under specific treatment the case is altered, as the symptoms may have been delayed, and it may be years before he can feel sure as to whether he ever had syphilis or not. I have seen cases whose whole life has been ruined, who have abstained from marriage, and have been running from one physician to another, thinking that every slight ailment they felt was due to a supposed case of syphilis, who, I am as sure as one can be of anything, never had syphilis at all. Such cases, if they had been properly treated, at the expiration of six months could have been absolutely guaranteed that they never would have any trouble of a syphilitic nature.

It must therefore be admitted that in doubtful cases those that are not syphilitic are seriously wronged by being put on specific treatment. The natural query follows, Are those that will prove to be syphilitic sufficiently benefited by being put at once on constitutional treatment to balance the wrong that is done to their more fortunate fellow-sufferers? I have already said that if the syphilitic virus has once been taken into the system, no treatment can prevent the development of constitutional symptoms, and clinical experience of the best observers has shown that not only is this the case, but that those cases in which the specific treatment is begun before the manifestation of secondary symptoms do not do any better than those in which it is delayed until evidence of constitutional infection shows itself. One of our teachers, to whose opinion we must all bow down, especially in matters pertaining to surgery, has said, I am told, that in deferring treatment we are practically allowing a fire to get well under way before we begin to put water on it. But that is hardly a fair comparison. We know that a certain course of treatment has a most marked effect on certain constitutional symptoms of syphilis, but we do not know that the same treatment will act as a preventive to the development of those same symptoms; on the contrary, we do know that it will not, and a fair statement would be that we are at least wasting time and water in pouring water into a building in which as yet no fire exists. I would say, then, that in any case of venereal sores in which any doubt exists as to their nature, we are doing the patient a serious wrong when we put him on specific treatment. Practically, unless there exist special reasons for immediate treatment, such as a very obstinate primary lesion, or one that takes on a destructive action, or where the healing quickly of said lesion is a matter of great importance to the patient, I much prefer to delay constitutional treatment until the appearance of constitutional symptoms. What is, then, the proper treatment of a venereal sore which we are called upon to treat? This will depend, of course, upon the character of the lesion, but in no case can any benefit be obtained by touching it with nitrate of silver. If a caustic is needed, which is rarely the case, the nitrate does not act as such. The only use that can be properly made of this agent is in cases of ulcers, either chancroidal or true syphilitic ones, that have arrived at the reparative stage, and show indolent vascular cellular granulations which need stimulating applications. Up to five years ago every text-book on the subject laid down destructive cauterization as the proper treatment for the chancroid, and in many to the present day the same stands. At that time I published a short paper protesting against such treatment, and advocating the use of iodoform as a local application. My experience since has been such as to confirm me in the opinions then expressed, and I hope to be able to take up the subject again, but in the present connection I will simply say that cauterization is rarely necessary. The objections to cauterization are, the great and needless suffering to the patient, the chance of producing an inflammatory phymosis if the lesions are on the prepuce, and consequently preventing proper cleansing and topical applications, the undoubted tendency to start up a sympathetic adenitis, the obscuring and masking the diagnosis by creating an inflammatory induration, and last, but by no means least, the fact that this treatment does not shorten the course of the disease.

The marked influence of iodoform as a topical application in diminishing suppuration and hastening the process of cicatrization has been admitted, and attracted much attention among surgeons lately, especially in Germany, and in no cases is this action more decided than in those of venereal sores, whether chancroids or true chancres. Its use has the serious disadvantage of being most offensive to the olfactories of the patient and his friends, but by care in applying it, and avoiding spilling it about, this can be somewhat controlled.

The advantages of the treatment are so marked, however, that some slight inconvenience ought to be cheerfully put up with; but even in the exceptional cases where iodoform cannot be used, we can do very well with other local applications without falling back on cauterization. The rapidity with which chancroids will clean up and heal under iodoform is at times little short of marvelous, and even the true chancre will in a short time skim over, the specific induration, however, still existing. There is one form of the chancroid that is apt to prove more obstinate to treatment, and that is a type that has been described by Clair as the exulcerous or elevated chancroid. It is usually multiple and situated on the free border of the reflected prepuce, in individuals where the glans penis is completely covered. Instead of looking punched out, the sore is actually raised above the level of the surrounding tissue, although its base and edges are the same as those of the usual sore. It is very apt to be the result of auto-inoculation from subpreputial lesions, and its peculiar form and obstinacy may be due to the fact that it is either washed over by the urine or irritated by the act of retraction at each act of micturition. At any rate it heals much less quickly, but in time it will do so, and, if we attempt to use destructive cauterization, from the situation of the lesions we are sure to get an inflammatory phymosis.

Up to this point I have endeavored to show that it is not rational treatment to cauterize a venereal sore, or to put a patient on specific treatment until constitutional infection is made evident. Let us see now what the rational treatment should be in those cases where we do have an outbreak of secondary symptoms. In syphilis we have one of the rare instances of a pathological process, to combat which we have undoubted empirical specifics, that is to say, drugs that for some unknown reason and in some unknown way do actually act as antidotes to the disease and exert a decided curative influence. All authorities on the subject admit the marked power of mercury and iodide of potash on syphilitic disease, but when we come to the method of administration, and more especially the length of time that treatment should be persisted in, we find a great diversity of opinion. Those who advocate a certain definite and well-marked-out course of treatment may be divided into two classes: the French school, headed by Fornier, who believe in an interrupted course (*coup sur coup*), that is to say, using the mercurial until the secondary symptoms have all disappeared, and then giving the patient a rest for a few weeks; then resuming treatment for a certain time, and then omitting it, and so on. The other, of which Dr. Keyes is the exponent, believe in an uninterrupted course of mercury in small, or tonic, doses for as long a space as two years or more. Both use the iodide to combat certain symptoms. Dr. Keyes has very decided ideas on the subject of treatment, which he has given to the profession. He prefers the protiodide of mercury as the form of the drug to be used in treatment by internal administration, and beginning with as small a dose as one centigram or one sixth grain, three times a day, he gradually increases the dose until he gets evidence of intestinal disturbance. He then takes half the amount that was required to produce the irritation of the bowels, and calls that the patient's tonic dose. This he administers for the space of two years, using the iodide of potash if symptoms occur which call for its exhibition. He did claim that patients who had undergone this course of treatment could be assured that they would not have relapses. Since his publishing this course of treatment, however, he has somewhat modified his views, chiefly in the way of prolonging the treatment even beyond the period of two years. The truth of the matter undoubtedly is, that by no method or length of treatment can we be sure of absolutely curing every case. But I think that we stand the best chance of so doing by giving a protracted course of a mercurial, in small or so-called tonic doses. The term tonic, as applied to a mercurial course, has been objected to, but it is a perfectly fair use of the term, — long and most carefully conducted experiments in counting the red blood corpuscles, under the microscope, having shown that during such a course these corpuscles are decidedly increased in number. It does seem as though the virulence of syphilis must have been modified during the last century. Undoubtedly the avoidance of pushing mercury to the point of calling forth its toxicological action, which was formerly always done, has had much to do with this, but there must be something more to account for the comparative mildness of many cases. That some cases are capable of a spontaneous cure is proved to every observer who sees much of the disease. Some are so susceptible to mercury that the use of it even in very small doses cannot be persisted in; others from recklessness or ignorance, or belief in real homœopathy, practically have no treatment at all; and yet some of them recover, and never hear from the disease again. So true is this that some of the first syphilographers, notably Didary in Lyons, and Sigmund in

Vienna, do not consider it necessary to use mercury in a mild typical case. Inasmuch, however, as in cases where we do use it we are struck by its marked beneficial action, it does not seem as though we are justified in not taking advantage of the power which we have in this drug, unless there is some harm done by its use. And that is not and cannot be the case where it is given in proper doses, and the patient is carefully watched to see how he bears the treatment. I myself do not think it is necessary to test each patient as to the amount he can bear, and then halve that as the regular dose. Most patients will do very well on one third grain of the protiodide, three times a day, given on a full stomach. Cases occur where even this moderate dose will disturb the bowels, and in such it is better to try some other form, rather than to combine opium with the prescription. The bichloride is often well borne where the protiodide is not, and the average dose would be one fifth grain, three times a day. There are cases, however, where any form administered internally cannot be taken with impunity for any length of time, and in such we can have recourse to the method by inunction. This method has not only the advantage of not disturbing the digestive tract, but by its means we can bring the system under the desired influence of the drug much more rapidly and surely than by that of internal administration, and for these reasons it is the sole form of treatment used by some practitioners. My reasons for not doing so are that it is dirty and disagreeable, and many patients will not use it for any length of time, or at least only very carelessly and inefficiently; and as a large proportion of cases do perfectly well under the more easily, and more-surely-to-be-thoroughly-carried-out method of internal treatment, I prefer to reserve inunctions for obstinate cases, or for those that have advanced into the later stages of the disease. In these latter, combined with iodide of potash internally, inunction is a most valuable and reliable help. Whatever form or method of mercurial treatment is used, the possibility of salivation should be borne in mind. With proper doses, especially at first, and proper precautions, there is not much danger of its occurring, however. Some patients have such a susceptibility to mercury that an incredibly minute amount will salivate them. Hebra used to tell, with great glee, of a Russian princess whom he salivated by the topical application of the acid nitrate of mercury to a plaque muqueuse, but such cases are extremely rare. Of the large number of cases treated at the dispensary, many of whom are stupid, and take no care of the state of their teeth or gums (a most important thing by the way), I have had an average of less than one case a year, and in private practice I never saw one. In iodide of potash we have as valuable a drug as in mercury. The generally received axiom, however, "secondary, mercury; tertiary, iodide," is not true, the fact of the matter being that as a *cure* for syphilis, mercury is our mainstay in the primary (if it is treated at all), secondary, and tertiary stages; the *rôle* which the iodide fills so successfully being to combat certain symptoms, and of these some occur in the very earliest part of the disease. Thus in the violent syphilitic headaches which sometimes just precede, and often accompany, the first secondary manifestations, the action of the iodide is most wonderful. Patients who have been suffering atrocious torture, especially at night, for days, will after twenty-four hours' use of the iodide be entirely freed from all pain. Any of the periostites that are so painful subside like magic; and as for the new formations, the gummy tumors, which may have reached the size of a pullet's egg, and look and feel as though suppuration had already commenced, in a week's time they will have melted away like snow. The deep ulcerations, also, whether of the cutis or mucous membranes, heal rapidly under iodide, but in all these cases I believe that a mercurial should be given in combination with it. Theoretically, the protoiodide of mercury should not be prescribed with the iodide of potash; the bichloride or biniodide being the forms generally used, or, as I said before, inunctions. When I say that mercury should be always combined, I mean, of course, unless there should be something to contra-indicate its use. For obtaining a decided effect from the iodide, not less than ten grains, three times a day, should be given, and in some cases this may and should be much increased. There is another class of comparatively early symptoms besides those I have mentioned, that is, the specific headaches and periosteal inflammations, on which the iodide has a marked influence. I refer to the secondary lesions of the mucous membrane of the mouth and throat. It was only after careful investigation of a large number of cases that I was convinced of this, but I do not think there can be any doubt as to its truth. One word as to local applications for these lesions. I feel very strongly that cauterization can be abused here as well as in the case of the primary lesions. As the true mucous patch is an indolent papillary formation, the occasional use of lunar caustic has a very good effect, and the same holds true in the case of the superficial secondary abrasions on the inner lips; but no lesion of the mucous membrane can heal, if it is being cauterized constantly. In the deeper ulcerations in the later stages cauterization is rarely useful. Of course the important factor is the constitutional treatment, but besides that, cleanliness, gargles, spray, especially of iodine, and insufflation of iodoform or calomel will act as useful adjuvants.

Dr. Wigglesworth read a paper on this subject at the last meeting of the Dermatological Association, based on cases of his own and Dr. Cushing's, which was published in the *Archives of Dermatology*, which contains a great deal of truth on this subject. As an application for the ulcerative forms of cutaneous symptoms I know of nothing better than the mercurial ointment, more especially now that by using a petroleum product for a vehicle in the place of lard we avoid the irritating action of the latter when rancid. The oleate of the oxide of mercury is a more elegant and expensive preparation, but neither as a dressing nor as a means of inunction have I found it as reliable as the plain unguentum.

Having thus hurriedly run over some few of the most important points in the rational treatment of syphilis, we come to the very important question as to how long this should be kept up, and the almost vital one to the patient, as to what answer we can give him when he asks, Am I cured? I do not see how, under any circumstances, an absolutely and unconditionally affirmative answer can be conscientiously given. I do believe, however, that quite a large proportion of cases are practically cured; or perhaps I should say, recover; that is to say, that neither they nor their posterity will ever be in any way influenced by the disease. To say that the disease is not eliminated, but only made latent, is, if it always remains latent, a mere quibble. As Hebra used to say, What would not we give to be able to render phthisis, or carcinoma, or Bright's disease latent to the same degree? However, those cases, rare it is true, but undoubted, where a patient acquires a second case of syphilis and goes through the whole sequence of symptoms from the primary sore in regular order, do prove that all remnants of the first attack must have been thrown off. Unfortunately, that means of proof would not be a very satisfactory one to that individual patient. If we cannot tell the patient that he can feel absolutely sure that his troubles are over forever, we can at least give him the benefit of the chances, and tell him that many others who have in the past been through what he has are now perfectly well and fathers of healthy families. I believe myself that if a patient has a fair constitution, takes proper care of himself, undergoes a protracted course of treatment in doses of such moderation that his general health does not suffer, and a couple of years have elapsed since treatment was stopped without the appearance of any sign of a relapse, — I do believe, I say, that the chances of there ever being a relapse in the future are very small. That I believe, and have never had occasion to call my belief in question.

(*To be concluded.*)

SOME OBSCURE MENTAL SYMPTOMS OF DISEASE.[1]

BY CHARLES F. FOLSOM, M. D., BOSTON.

SUCH a considerable number of cases of disease seriously interfering with some of the functions of the mind without causing marked intellectual disorder have come lately within my observation that I have thought it worth while to call the attention of the Society to their more important features.

A child, seven years old, with the history of profound cerebral disturbance at the age of five, and right hemiplegia of short duration, was observed to have an entire change of character since that serious injury to the brain. Previous to it he had been in no way different from what might have been expected of a child of his age and circumstances. After it the balance of the mind was found to be entirely destroyed, although the memory and perceptive faculties were observed to have become extraordinarily acute. Upon entering the room it was impossible to arrest his attention sufficiently to get answers to questions for which he had abundant intelligence, except for a moment at a time; his eyes glanced rapidly about, and in five minutes he had taken in nearly everything to be seen, beside prying into drawers and pockets so vigorously as to keep his mother on the alert to prevent him from injuring himself or some object in the room. His mother stated that the affectionate nature which he had before his brain disease had remained, but that, with it all, there was in him the real spirit of a devil, which could not be corrected, or chastised, or drawn by loving care into anything better. He was the torment of every one who attempted to teach him, and yet he managed, by the aid of his unaided faculties, to pick up knowledge of a certain kind much faster than his companions. He not only did not possess the power of controlling his mental operations and his actions natural to a boy of his years, but he could not be, and never can be, educated into them. He is, and always will remain, like a locomotive with the brakes off and steam up, off the track, as long as he lives, in spite of the best efforts of his friends and himself to the contrary. Steady application, reasonable self-control, reflection, and judgment, he will never have, except to a limited degree, while the acuteness of his other faculties will keep him in constant danger up to the time when he follows the natural law of the unfortunates like him to die of disease or accident, perhaps hastened by his own temerity, to commit suicide, to develop into more general mental disease, or to be convicted of crime justly or wrongly.

The second case was similar to the first except in its origin, which was congenital, the child having been born almost literally in the midst of a drunken brawl of a mother who had rarely been sober during the whole period of gestation. Its future will be similar to the other's.

It is by no means uncommon to see less marked types of this form of brain disease in women after confinement, in young persons of families with neurotic tendencies, after typhoid fever and scarlet fever, and in old people as the result of cerebral hæmorrhage, but of so marked a degree as in the two cases which I have quoted, or sufficient to constitute a genuine type of insanity, it is so rare that even many men having had long experience in insane asylums state that they have never seen it.

The next case is one, the notes of which were given me by Dr. S. K. Towle, whose words I cannot do better than quote, of a man whom he had under his care at the Soldiers' Home, near Milwaukee, Wis., some eleven or twelve years ago.

"He had been a lieutenant in a volunteer regiment, and I gave him rather more privileges on that account, but after a time I found that he was more nearly an example of 'total depravity' than I had ever seen. There was no truth in him, and he was intelligent enough to make his lies often seem plausible to me as well as to others. By his writing, and talking, and conduct generally, he kept the patients and their friends in a ferment, and gave me more trouble than the whole hospital beside. For a long time I could find no evidence of any disease about him, but after long observation I thought that I got evidence of epileptic seizures in his sleep, and possibly lighter ones, *petit mal*, in the day time, and I settled down on that. As to insanity, I am sure he would have impressed a casual observer as an unusually bright and intelligent fellow, while at the same time perhaps he would be maliciously lying in every sentence.

"He had a small scar about the middle of his forehead, which he said was due to a slight flesh wound from a glancing ball in battle, and I finally thought that possibly his epilepsy might be caused from the effects of the blow from the bullet. While he was under my care an older brother came to see him, and he told me that up to the time his brother, my patient, who so tried my patience, entered the army he was almost a model young man, amiable and affectionate, the pet of the whole family and intimate friends; 'but,' said he, 'ever since he came back he has been possessed of a devil if ever any one was.'

"After a time, much to my delight, he asked for a transfer to the Soldiers' Home at Dayton, Ohio, which I got for him with commendable alacrity, and he went there. His conduct at Dayton was the same as with me, but after a few months he quite suddenly died, when an autopsy was made. In sawing open the skull, at the point of the small scar on his forehead, the saw came directly upon the butt end of a conical bullet, two thirds of which projected through the skull, piercing the membranes and into the brain. The internal table of the skull had been considerably splintered by the ball, the pieces not being entirely separated, and there was evidence of severe chronic inflammation all around, and quite a collection of pus in the brain where the ball projected into it. Here was the 'devil' that had possessed the poor fellow. Instead of being an outrageously wicked, unprincipled man, he was a martyr to the Union cause as much as Abraham Lincoln, and more, for the ball that killed my patient not only took his life, but destroyed his character, lost him the love and esteem of his friends, and doomed him for half a dozen years to do the things he would most have hated and despised when he was himself. Dr. Dunlap, the assistant surgeon at Dayton, told me that he found in this man's trunk letters from several, half a dozen, I think, at least, women in various places, from which it appeared that he was engaged to be married to each one of them. The letters were neatly tied up in packages, each one's separately, in several instances with photographs supposed to be of the writers, and the date of reception and reply was noted on many of the letters in a business-like way."

---

[1] Read before the Annual Meeting of the Massachusetts Medical Society, June 13, 1882.

The fourth case is of a gentleman, who, without other marked mental symptoms, except an unusually advanced mental deterioration for his age, sixty-four, and yet without senile dementia, had so strong an impulse to kill two members of his household, a son whom he loved, and a mother-in-law who annoyed him in many ways, that he begged to be sent to an asylum for the safety which his family persistently refused to think necessary. In the course of six months, with the progressive weakening of his mental faculties, his power of self-control became so much diminished that during one of his paroxysms of homicidal impulse, excited perhaps in part by irritation from a natural cause, he killed his mother-in-law, an act entirely abhorrent to his nature. He afterwards begged to be never left alone with his son for fear that he might commit some act of violence upon him. There was no delusion, no illusion, no hallucination, no mania, no melancholia, no delirium, no unconsciousness, no ignorance of the nature of his deed, no blunting of his sense of right and wrong, not the slightest moral perversion, no feeling but horror at his doing such a thing, and yet the insane impulse, as inevitable as the sword of Damocles or the dagger of Macbeth, was so strong that he could not resist it. He was *conscias sui*, but not *compos sui*. After his arrest his feeling of grief and remorse was so great, the disgrace of being hanged, which he feared, was so terrible, and his mental suffering was so indescribably intense, that he tied a handkerchief around his neck, meaning to hang himself, an entirely sane and logical process, but, in spite of his insanity, his fine character asserted itself, his ordinary self-control returned, and he said, "No, if I am to perish for my act it shall be at the hands of the law, it must not be by my own hand; that is not right." It is not possible to find a more irresponsible act than this man's homicide, and it is not easy to conceive of more tremendous self-control as regards his own self-destruction, or more sane appreciation of his own condition and relations to society.

The cases which I have described, including that one which was complicated with senile dementia, come under the head of moral insanity, not very properly so-called, because the loss of control over the operations of the mind constitutes evidence of impaired intellect and is a purely mental symptom, which under some form or other is always discoverable. There is in many cases frequent or persistent headache; in most, there are great irritability, some feature of intensely developed egoism, general or partial moral perversion, exaggerated or perverted sexual instinct, decided loss of the sense of the relation of the individual to the community, a striking misconception of the adjustment of means to ends, overwhelming strength of ideas and impulses as compared with power of self-control, and yet a certain fixed standard of right and wrong, together with a definite sense of duty and a power of self-control at certain times and in certain directions, which with the quickness of the perceptive faculties and memory, usually convey to those not familiar with the disease an idea of simple depravity. It differs from the eccentricity of character over which more and more control is gained with advancing age. Its diagnostic point, if there is one such, consists in the fact that like other diseases it is progressive, and that it ends as a rule, in suicide, or advances slowly into mania or dementia with such gradual progress that there is no time at which a marked change in character, or condition is discernible. Until mania or dementia appear, crimes are rarely committed; and the point at which accountability ends and irresponsibility begins is the most difficult problem in the whole range of the medical jurisprudence of insanity. In reported cases of recovery, I should doubt the diagnosis.

I have illustrated very briefly a type of insanity which is recognized, under one name or another, by the leading authorities in mental disease, although not fully described except in the German medical literature. It is easy, as Krafft-Ebing says, for the non-expert expert to fail of a correct appreciation of such a case. This seems to me the most terrible of all of the many forms of mental disease, as it is also the least understood and the most difficult to differentiate from depravity. The very sharpening of some of the faculties of the mind, coincident with defect, degeneration, or disease manifested in others, is generally accepted as evidence of responsibility, although it is only an illustration of that marvelous compensation in nature for failure in one direction by concentration of force in another, by virtue of which the blind deaf-mute learns to see with her fingers and to hear with her sense of smell.

Important as is the medico-legal study of this form of disease, it is not my intention to say more in that direction at present. The point to which I desire to call the attention of our Society to-day is that these same symptoms may exist, and do very often exist, although in far less degree, as the early, and often as the only, indications of the greater number of those many diseases which we group together under the name of insanity; that they may accompany chronic disease of the nervous system; that they frequently indicate acute, curable disease, and also that in children especially they are often overlooked and neglected because their import is not fully appreciated. By far the majority of mental diseases, taken at the time when they are recognized and placed under treatment, are absolutely incurable. For months also, often for years before that time, however, there have usually been unmistakable, or at least suspicious, evidences of brain disorder, consisting simply in slight change of character, so slight that in a case which has recently come to my attention, a young woman in the early stage of mania was advised to marry, and with sad results. I should say that it is exceptional for general paralysis of the insane and for insanity of persecution, for instance, to be diagnosticated for months after its presence is apparent; and not seldom the individual has recognized for a long time the fact that he has not been fully himself. The intellect remains tolerably clear, the capacity for affairs is nearly, if not quite, as good as ever, the memory is unchanged, the mind is often even more active than usual, at least not commonly of diminished power, and yet the person is not himself. He becomes more readily excited, very easily irritated, neglectful of his home duties, suspicious and distrustful of his best friends, inattentive to the accustomed courtesies and refinements of life, disagreeable to his family, less truthful and scrupulous, at times slightly depressed. Less often there is simply a condition of mental and physical torpor and lowered moral standard.

These symptoms, especially if without external cause, following child-birth, fevers, brain disease, physiological changes, or any illness depressing the system, indicate a condition which needs treatment as much as a fractured leg or an inflamed joint.

The question naturally arises, "What can be expected by treatment even at this early stage of a disease in which less than one fifth of the cases are permanently cured?" I can only answer that if we follow the advise of Sydenham, that scarlet fever is dangerous only from the interference of the physician, many of our children who might have been cured of an acute nephritis will die of Bright's disease. If we fail to examine most carefully into the causes of every slight cough, many an innocent catarrhal pneumonia will end in fatal pulmonary consumption, and an insidious pleuritic effusion will now and then kill our patient almost before we know what is the matter with him. I cannot help thinking that an earlier detection of insanity will result in its wiser treatment and in a greatly increased proportion of cures.

I should not be justified in occupying your time now in a consideration of the proper management of the obscure mental symptoms which I have described, and which, for want of a better name, are often called nervous, farther than to say that I believe the matter to be one which will repay careful study, and which cannot be properly dismissed, as is the popular idea at present, in the case of women at least, by putting people to bed and fattening them. I shall never forget an intelligent lady's remark, that while her husband was rich, she had so-called nervous prostration. After he had lost his health and his property and she had something to do, she got well.

I have lately seen several cases of chorea in which the characteristic muscular twitchings were nearly or quite absent, or only observed after some physical exhaustion or upon attempts to perform coördinate movements. The usual mental symptoms existed, commonly with severe headache, and disappeared in about the usual time, if treated with rest of the brain, general hygiene, and arsenic, but persisted, if neglected or not properly attended to. I believe such mental indications of disease, independently of chorea and insanity, to be more common than has been supposed, that their judicious treatment is quite necessary to the future welfare of the race, and their prevention demands our most thoughtful and earnest attention. I have even thought that with our present idea of education the whole available vital energy of girls at least is often exhausted in physical inactivity and intellectual development at the expense of what in our ignorance of its exact nature, we call nervous force. For this our school system is largely responsible, and will continue to be so, until the intense strain upon mind and body is let up, and physical training and moral force receive that attention which their importance demands.

Mr. Charles Roberts, of London, than whom no one is more competent to express an opinion upon that point, has recently said, in a letter to Mr. Edwin Chadwick, "I think children are being very cruelly used by the Legislature. It took nearly fifty years, and half as many Acts of Parliament, to emancipate them from the injurious effects of excessive physical labor; but the result has been merely to transfer them from one taskmaster to another — from the manufacturer and their own parents to the schoolmaster; and to subject them to mental strain and physical inactivity, more injurious to their future well-being than their former condition. I look on your proposal to introduce the half-time system into schools, as a sort of mental 'Factory Act' of the utmost importance and urgency, and the establishment in elementary schools of systematic physical education, as absolutely necessary to prevent great physical degeneracy in future." We may not agree literally with Mr. Roberts, but must all acknowledge that there is much force in what he says. Each human being has a certain amount of force which can be safely expended every twenty-four hours, and which can be kept fresh only by sufficient rest, food, and physical exercise. The idle as well as the busy may exhaust, and more than exhaust, their daily supply, and with only one result.

◆

FIBRO-MYOMA OF UTERUS CAUSING MOST INTENSE DYSMENORRHŒA FOR FIFTEEN YEARS; ENUCLEATION; RECOVERY.[1]

BY J. W. ELLIOT, M. D.

ON March 15, 1881, I first saw my patient, Mrs. M., living in a suburb of Boston, in quite comfortable circumstances. She gave me the following history: She was thirty-six years old, had been married ten years, but had had no children or miscarriages. The catamenia had occurred regularly, without pain, from the age of sixteen until fifteen years ago, when she began to suffer some pain at each menstruation. This pain continued for eight years, but during the last seven years it has grown steadily worse, and now it has become perfectly terrible. She described the pain as severe cramps and bearing-down pains in the lower abdomen. It was usually most severe during the first few days of the flow, but lasted through the whole time, which was five days. The amount of the flow was about normal. Her husband told me that she was always obliged to go to bed at those times; that when the pain began she tossed about, groaning in agony, and often threw herself out of bed on to the floor, where she rolled about in a most helpless state; that she had twice threatened to take her own life in the despair of looking forward to the next menstruation; that she must always remain in bed the week following to recover from the exhaustion; that on the second week she gradually got about again; that the third week was the only part of each month when she could in the least enjoy life.

---

[1] Read before the Surgical Section of the Suffolk District Medical Society, May 20, 1882.

She had been under the care of various physicians for several years, but they had all failed to help her in the slightest degree. "One had dilated the cervical canal, another had pronounced the trouble to be constitutional," etc., etc. She had taken and still continued to take large quantities of morphia, which at first had relieved the pain somewhat, but lately it seemed to have no effect.

She complained of habitual constipation, pain in the back, left side, and lower abdomen, which pains were all increased by walking or standing, and now she is able to walk but a short distance. She also complained of a profuse leucorrhœa, and she thought she felt pain in the neck of the womb. There were no vesical symptoms.

Status præsens. My patient was a blonde, with very white cheeks and pale lips. She was of medium height, somewhat deficient in bone and muscle tissue, but possessed of an abundance of flabby fat. Her lips quivered before she spoke, her face flushed when she was addressed. She was very excitable, and sank back exhausted after the slightest exertion. In short she presented all the symptoms of nervous debility.

Upon examination I found extreme hyperæsthesia of the lower abdominal wall and of the entire genital tract, so that a thorough examination was almost impossible. There was tenderness in the left ovarian region. The vagina and external genitals were much irritated by leucorrhœal discharge. The uterus was tender, somewhat enlarged, and slightly anteflexed. The cervix was large and very soft, while the os externum was open enough to admit a finger-tip. A sound was easily passed into the uterine cavity, which measured two and three fourths inches, the sounding causing pain and a flow of blood.

I regulated her bowels, prescribed dialyzed iron, and advised a constant use of the hot douche in the manner described by Dr. Emmet.

One month later, April 2d, I saw her again at my office, a day or two before she expected her catamenia. The use of the hot douche had reduced the sensitiveness of the vagina and the size of the uterus. The cervix felt very soft and irregular. Upon introducing the speculum I saw immediately a polypus the size of the tip of my little finger, hanging partially out of the cervix. This polyp had appeared since my last examination. My explanation is that with the approaching menstruation it had become engorged with blood, and was then too large to remain in the cervical canal, and therefore had been driven out. Two leeches were applied to the cervix in the hope that it might diminish the pain of the coming menstruation.

On April 16th, two weeks later, with the assistance of Dr. Morse, the polyp, which was attached near the os internum, was twisted off. The cervix was then forcibly dilated to admit a sound ten millimetres in diameter, and the uterine cavity scraped out with a curette. This procedure brought away several small bits of mucous polypi. The operation was done under ether, and with the strictest antiseptic precautions. The temperature remained normal. The patient suffered some pain and tenderness in the abdomen, but sat up on the twelfth day.

The polyp was examined by Dr. Gannett, who reported that it was made up of muscular fibre containing many blood-vessels, and hypertrophied mucous membrane containing numerous gland structures; that it was a combination of a mucous polyp and a fibromyoma.

On September 28th, five months later, the patient placed herself under my care in town. Since last seen she had menstruated with less pain for three months, when she began again to have very severe bearing-down pains of a somewhat different character from the old cramps. I applied electricity to the cervix and to the interior of the uterus several times with the idea of giving tone to the uterine tissues, and of overcoming any spasmodic contractions which might be a cause of her pains.

On October 2d I had an opportunity for the first time of seeing what her suffering really was. The catamenia began in the morning. About eight o'clock in the evening I was called, and found her groaning and tossing about in great agony. At intervals she would clinch her fists, and make a great expulsive effort. The pains were exactly like labor pains. I found that the uterus contracted violently at each pain. I etherized her for three hours. Under profound anæsthesia the uterine contractions continued as before. I took the opportunity to introduce a sound into the uterus, but no obstruction was felt. After the ether I succeeded in making her comparatively comfortable with subcutaneous injections of morphia and suppositories of opium, belladonna, and assafœtida.

After seeing her at this menstruation it was evident to me that the uterus was making an effort to expel something. I proposed dilating the uterus, to which she agreed.

October 17th Dr. Baker kindly saw her in consultation, and agreed with me that exploratory dilatation was the best treatment. On that occasion the cervix was soft and somewhat open. The uterus when felt bimanually seemed enlarged, but the uterine cavity measured only two and one half inches. This discrepancy suggested a new growth at the very fundus. The sounding caused pain and a flow of blood. This vascular condition of the cavity suggested a fibroid.

October 18th a tupelo tent was placed in the cervix uteri. It caused great pain, which was partially quieted by morphia, etc. The next day the tent was removed at nine A. M., and replaced by another larger one. At four P. M. ether was given by Dr. Morse. The tent was found to have been partially forced out, therefore the uterus was not sufficiently dilated. One large and three small tupelo tents were then introduced. The next morning (October 20th) the patient was again etherized by Dr. Morse, who also rendered me most valuable assistance. The vagina being irrigated with carbolic water the tents were removed. The uterus was then drawn down to the vulva with double hooks, and washed out with carbolic water. The finger being passed in to explore the cavity, I was barely able to touch with the tip of my finger an evenly rounded mass of dense tissue slightly bulging toward the uterine cavity. This I recognized to be a myoma. The uterus was then further dilated with hard rubber plugs and my fingers, in order to make more room to work in. The tumor being seized with double hooks was dragged forcibly downwards, while it was torn loose from the surrounding tissues by the finger-nail and the blunt end of a pair of long, curved scissors. It was with some difficulty shelled out and delivered, and proved to be a fibro-myoma about the size of an English walnut. It was lying embedded in the posterior uterine wall at the fundus; another one, the size of a pea, was found near it. There was no bleeding, and no shreds of tissue were left, therefore a drainage tube was thought unnecessary. The genital tract being again irrigated with carbolic water, the patient was put to bed. She did perfectly well, the temperature being normal after the first day, when it was 100.8° F.

On October 28th catamenia occurred with the same old pain, which was almost as severe as before. The patient was in a very nervous and discouraged condition. I therefore kept her in bed, and fed her with as much food as I could force her to take for the next three months.

On November 28th, about six weeks after the operation, the catamenia occurred with considerable pain.

December 30th, two months after the operation, catamenia occurred without any of the old severe pain. She had only a slight pain in the back. No medicine whatever was given.

Her convalescence was interrupted by an attack of dysentery; nevertheless she has gained much in strength, and her general nervous condition is greatly improved. She now menstruates regularly and without pain.

The diagnosis was extremely difficult, because the uterus was not sufficiently enlarged to suggest a new growth, because the most common prominent symptom (menorrhagia) was absent, and because the neurasthenic and hysterical conditions might well have accounted for the dysmenorrhœa.

Without attempting to go over the field of pathology and surgery of myomata of the uterus, I will call your attention to and invite your discussion on a few points suggested by this case.

The first practical point is that having found one myoma you should make careful search for more, because as a matter of experience it is not uncommon to find two and even three or more, as in this case. Thus, having found one near the os internum, don't neglect to explore the whole interior of the uterus.

As giving some idea of the frequency of the multiplicity of myomata, I will quote Winckel, who found in three hundred and eighty-two autopsies where myomata existed, that in thirty-nine per cent. there was more than one.

In removing these tumors I consider all the antiseptic precautions to be of the most vital importance, because, as a matter of fact, most of the fatal results come from septic poisoning, and because, theoretically there are also most urgent reasons. We find the smaller tumors situated at various depths in the uterine wall, and often extending even to the peritoneal surface (as shown in Winckel's Pathological Atlas). Thus there is always the chance of necessarily opening the peritoneal cavity. The larger tumors often contain large, gaping veins which open immediately into the uterine plexus, a most favorable condition for septic thrombo-phlebitis. Besides these natural dangers the operator is working under great disadvantages. The seat of operation being out of sight, the instruments can only be guided by touch. The manipulation is greatly embarrassed by the necessity of working through a small hole at the os internum. Under these circumstances the peritoneal cavity may be accidentally opened. Besides, after the tumor has been successfully removed, there often remains a jagged wound, with shreds of tissue, which eventually slough. Here is a favorable seat for a septic process. Under these conditions, then, all will agree that there is an especial danger of septic poisoning. This brings me to the consideration of what are the important antiseptic precautions to be taken in this operation. Besides the ordinary precautions which are to be taken in every surgical operation, the question here arises, How shall we dilate the uterus? I *say most emphatically not with sponge tents*, for one of the first principles of antiseptic surgery is to have the field of the operation thoroughly cleaned and antiseptic. Who ever removed a sponge tent which did not stink? Certainly, every sponge tent, however carefully prepared, which has been in the uterus sufficient time to dilate, comes out with a putrid smell. I have had occasion, recently, to remove some bits of compressed sponge which had been but a short time in the vagina, and it was noticeable that wherever the sponge had been in contact with the vaginal mucous membrane there was a deep gangrenous ulcer. The meshes of the sponge tent work themselves into the uterine tissue, and when it is removed there are left erosions filled with bad-smelling pus. This certainly is not a proper field for an antiseptic operation which may open the peritoneal cavity or a large uterine sinus. For these reasons Schroeder has become so disgusted with the use of tents that he prefers to split the cervix uteri down to the vaginal junction, and force his finger into the fundus. Of all the methods yet proposed the use of the tupelo tent seems to me the most satisfactory and safest way of dilating. Tupelo tents are made by compressing smooth, clean pieces of a particular kind of South American wood (*Nyssa aquatica*).[1] I have never known a bad result to follow their use. They accomplish dilatation and come out perfectly sweet even after twelve or twenty-four hours retention. After dilating with tupelo we can then begin the operation under much more favorable conditions.

The symptoms in this case were somewhat peculiar in that fibroids at the fundus are usually supposed to cause hæmorrhage without dysmenorrhœa, while fibroids at the os internum usually cause dysmenorrhœa. In our case the tumor was at the fundus; there was no hæmorrhage but excessive dysmenorrhœa. This opens the question of what is the cause of the hæmorrhage in these cases, the more interesting because hæmorrhages occur from other mucous membranes (as, for instance, the intestines) under similar circumstances.

In a general way the presence of the tumor is undoubtedly an active irritation which causes congestion of the parts, and its pressure on vessels can cause venous stasis and hæmorrhage. Fibroid tumors themselves are usually poorly supplied with blood, nevertheless the sudden, profuse, alarming hæmorrhages usually come from the tumor, the immediate cause being the opening of a vessel either by an ulceration or by some injury, such as tearing open a venous sinus by uterine contractions, etc. The ordinary oozing and profuse menstruation is most common with the submucous and interstitial varieties, and seems to come from the mucous membrane either of the tumor or of the uterine cavity. If the tumor is pediculated, its pedicle may become so compressed by the uterus as to cause a venous stasis in the mucous membrane of the tumor, which would cause hæmorrhage even if the tumor were not ulcerating. In the large, broad-based submucous and interstitial varieties Atlee and others suppose the mucous membrane stretched out so thin over the tumor that the vessels are easily ruptured, but according to Gusserow[1] there is no proof of this, and it seems to him an improbable explanation for the majority of cases. He finds, however, that when the mucous membrane is so tightly stretched over the tumor the rest of the uterine mucous membrane is in a state of collateral venous statis, that is, it is swollen, softened, full of blood, and easily bleeding. Probably many different principles play a more or less important *rôle* in causing the hæmorrhages, but the most plausible explanation seems to me to be that the combination of rubbing and chafing of the mucous surfaces with the venous stasis causes the mucous membrane either of the uterus or the tumor alone or of both together to become chronically inflamed and thickened, and in a condition like the so-called fungoid degeneration, which is a common form of endometritis, where the mucous membrane is thickened and contains numerous newly-formed glands and blood-vessels, which constantly rupture, giving rise to persistent hæmorrhage. Dr. Gannett tells me that he has found this condition of the mucous membrane on polypi which have been sent to him for examination.

---

[1] Volkmann's Vortrage, No. 187. Leopold, London.

It seems, then, that the tumor in this case did not protrude enough into the cavity to cause a chafing or to become strangulated by uterine contraction, and was too small to cause a collateral venous stasis, hence we did not have hæmorrhage as a symptom.

◆

ELEPHANTIASIS ARABUM IN THE SAMOAN ISLANDS.

BY ARTHUR C. HEFFINGER, M. D.,
Passed Assistant Surgeon, United States Navy.

ONE can scarcely realize the paucity of literature upon Elephantiasis Arabum till one has looked in vain through the vast field of medical writings for even a passable description of the disease. In some of our leading works upon the practice of medicine no mention whatever is accorded the malady, their eminent authors evidently considering it a surgical one; while, turning to surgical treatises, we find that the majority of them simply give a brief description of *lymph scrotum* and the operation for its removal. There is really little, however, about the disease that is not already known to the profession, though in no one book have I seen it fully considered.

This form of elephantiasis is chiefly found in the torrid zone, but has no longitudinal boundaries. It occasionally occurs in temperate climates, though to a much less extent than true leprosy, and may be considered as essentially a tropical disease. The Barbadoes leg of the Antilles, Cochin leg of China and India, Yava skin of Polynesia, and Féfé of Samoa are all elephantiasis Arabum, and all present essentially the same characteristics. As the theories of causation advanced thus far have been contradictory and incomplete, it was a great disappointment to me that the flying cruise I made through the Samoan group did not offer the opportunity for as careful and extended investigation into its ætiology as I could have desired.

The disease is very common in all of the South Sea Islands, and in the Samoan — from the rough statistics I could gather — about one per centum of the total number of inhabitants are affected by it. Men are more frequently attacked than women, in the ratio of five to one, the disease rarely manifesting itself in either sex before the age of sixteen years. Children are said to enjoy complete immunity from it, and I could find none affected in the towns and villages I visited. Race seems to exert a certain predisposition, the dark Polynesians and coal-black negroes from the New Hebrides being more prone to attack than the white man. Of the seventy-five whites living in the town of Apia, and fifty more scattered over the different islands of the group, not a single woman and only one man had contracted féfé. This man had a lymph scrotum, and ascribed it to careless exposure by sleeping on the ground, after the native style, while trading through the various islands of the South Pacific.

Neither Dr. Wise's theory of diseased veins, nor Mr. Day's of malarial fever, nor Mr. Dalton's of a constitutional origin for elephantiasis Arabum seem to be borne out by a study of the disease as seen in Samoa. Dr. Carnochan's view of enlarged arterial trunks appears more nearly correct than any yet put forward, for whether the arteries of the affected parts are enlarged prior to the first inflammatory attack or not, they certainly are during the course of the disease, being at the same time greatly increased in number. The veins are also augmented, both in size and number, and as their walls are closely adherent to the gristly mass through which they run, they appear much like the sinuses of a gravid uterus, the cut ends always remaining perfectly patulous. These veins cannot be called diseased in a causative light, for they are simply enlarged in calibre and multiplied to accommodate the extra arterial flow. The occasional febrile movement which has been noticed at the beginning of the inflammatory attacks, together with the epochal character of these onsets, may have given rise to the idea of a malarial origin for this variety of elephantiasis, but in Samoa at least, malarial influence can have no effect upon it. This group of islands is of volcanic formation, all its members are high, rocky, and precipitous, and are swept constantly by the strong southeast trade winds. Periodical fevers are unknown, and I should unhesitatingly pronounce them as thoroughly salubrious and free from miasmatic influence as any vegetative tract in the world.

The local nature of the affection in Samoa would appear to be explained by the manner in which it is probably contracted. The natives all live in low, thatched huts, the floors of which are covered with gravel to the depth of three or four inches. Upon this floor small mats are placed, and the native sits crossed-legged, smoking, three fourths of the day. At night several mats are thrown together upon the damp, gravel floor for a bed, and with a section of bamboo for a pillow and a piece of *tapa* cloth (beaten from the bark of the paper mulberry) for a covering, the Samoan makes himself snug till morning. As he wears only a *lava-lava*, or breech clout, of course when he sits, the legs, thighs, nates, and scrotum are in contact with the thin mat which covers the gravel floor, and the constant chilling and irritation of the exposed skin and subjacent tissues produced by the dampness and changeable temperature of the earth, aided no doubt by the uneven floor, cause, after a certain length of time, a slight erythematous swelling of one or more of the parts, attended by a feeling of heat and itching, and now and then a little fever.

---

[1] Handbuch der Frauenkrankheiten, redigirt v. Billroth. Vierter Abschnitt.

This first attack can scarcely be called inflammatory in the great majority of cases, and, as a rule, no physical change remains which is apparent to the eye; but the part or parts are undoubtedly rendered much more sensitive to exciting causes, for soon another congestion sets in, this time becoming a *bonâ fide* inflammation, which after its subsidence leaves the region uniformly enlarged, the skin feeling thick and brawny, showing a hyperplasia of the cutis vera and subcutaneous connective tissue. These inflammatory attacks recur from time to time, each recurrence adding more plastic material, which gradually undergoes morphological changes. The parts generally affected are the extremities and scrotum in the male and lower extremities in the female. Disease of the arms and genitalia of women is only now and then encountered. As the disease progresses the skin is thrown into large folds at the flexures of the extremities, and between these folds deep fissures often form and obstinate ulcerations occur. Sometimes this hypertrophy, once fairly under way, steadily advances without apparent inflammatory epochs. The enlarged limbs seem to give no trouble aside from the mechanical obstruction of bodily movements. The enormous scroti make micturition difficult and render walking all but impossible, and it is curious to see the novel suspensory devices resorted to by the natives to get them out of the way of the thighs.

I have never seen a real case of false leprosy attacking the head, neck, or face, and when the disease is mingled with the true variety, — as, for instance, in Honolulu, — this fact, together with the absence of anæsthetic spots, is considered of great diagnostic value during the early stages of the two diseases by experienced physicians of the Sandwich Islands. I can recall several cases exhibited to the class during my student days as elephantiasis Arabum affecting the face, tongue, and fauces, in one case the larynx also being diseased and requiring the use of a tracheotomy tube to breathe, but I am satisfied now that all these cases were really elephantiasis Græcorum.

The disease progresses slowly, and only proves fatal by interfering with healthy nutrition, thus exhausting the patient's forces and rendering him liable to attacks of intercurrent diseases, especially pulmonary phthisis, which is very prevalent and very fatal in the Islands.

The only treatment which has been attempted so far in Samoa has been directed to the scrotum, the excision of which is a common operation with visiting American naval surgeons, and most popular among the natives. As soon as an American war vessel anchors in any of the Samoan ports the medical officer — *fomai* — is beset on all sides by the relatives of the afflicted, and ere a day has passed he has sufficient material to keep him busy for a month. In the harbor of Pago Pago I improvised a crude hospital on shore in one of the native huts, and held daily clinics. In this hospital, upon the hewn trunk of a tree but four feet long and two high, and with the assistance only of an officer friend, I removed a lymph scrotum of thirty-five pounds' weight. The man was placed upon his back on the hewn block, with his buttocks brought well to the edge, and the tumor supported upon a small box. Ether was given, and when the patient was thoroughly under its influence a stick was put between the teeth on one side, which, together with the ether cone, was held during the operation by an intelligent native. The penis was exposed by laying open the superincumbent tissue upon a director, after which it was rapidly dissected from its bed — care being taken to avoid wounding the frenum and suspensory ligament, — and reflected upon the abdomen. An incision was next made downward, outward, and backward, from the bed previously occupied by the penis, and carried to a depth of two inches through the thick, gristly tissue without revealing the tunica vaginalis. The hæmorrhage was so extensive from both arteries and veins, and the difficulty in tying the vessels, owing to the close union of their walls to the stroma of the tumor, caused such delay that it was deemed safest to tie each important vessel as cut, and continue the search for the testicle by shallow incisions of half an inch depth. Six or eight of these exploratory cuts were made before the tunica was opened, and found to contain a large gelatinous hydrocele. The testis lay at a depth of six inches from the surface, and it was not without much time and care that, with its cord, it was detached and reflected on to the abdomen. Profiting by the experience gained in searching for the right gland, the left was much sooner reached, dissected from its attachments, and reflected. The entire hypertrophied mass was finally removed by two transverse incisions; the first half severing the mass, when the great arterial and venous hæmorrhage made it necessary to stop and catch up the bleeding vessels with forceps, and the second completely detaching the tumor from the body. The operation lasted an hour and a half, during which time the patient lost much blood, though he still had a fair pulse at the conclusion. The only knife used was a stout, straight, sharp-pointed bistoury, which was found to answer all requirements admirably. There was a little uncertainty about the soundness of the left testis, but the man was given the benefit of the doubt, and the two glands were brought together and held in apposition by oiled silk dipped in carbolized oil, the dressing completely surrounding and separating them from the wound below. Over the oiled silk several layers of lint saturated with the carbolized oil were placed, and finally over the lint a couple of thicknesses of dry cotton batting. The penis was put up separately in oiled silk and lint, and, with the testes, was supported by a T handkerchief bandage.

The patient rapidly returned to consciousness after stopping the ether, and expressed himself as quite comfortable. A good dose of morphia was given, and he was not seen again till the next day, when he was found in an excellent condition, having no fever or pain. The glands had closely adhered, and presented the appearance of a scrotum from which the skin had been removed by blistering. There was a little fever on the second and third days after the operation, but it caused no uneasiness, and the case progressed so nicely that the man was allowed to sit up on the fifth day, and when the ship left, on the seventh, granulation and cicatrization were rapidly advancing.

This man had elephantiasis of the right lower extremity also, and, had the ship remained a few weeks longer, I designed deligating the femoral artery after the manner of Carnochan, which seems to offer the only remedial hope when the disease attacks the extremities.

Out of seven scrotal excisions done in Pago Pago by our naval surgeons only one death ensued, and that was due entirely to the patient's neglect in not carrying out the surgeon's orders after the ship had sailed. The operation, though tedious, is neither difficult nor dangerous, and were it not for the excessive immediate bleeding and a certain liability to secondary hæmorrhage, would give the surgeon no anxiety.

Several specimens of lymph scrotum were examined under the microscope, and the presence of parasitic forms carefully searched for, though not, perhaps, with the acuteness of a specialist's eye. Mr. Manson, of Amoy, states that the *Filaria sanguinis hominis* plays an important part both in true and false leprosy; but not a trace of this organism could be found in the specimens examined, nor could any other form of organic life be detected. The great bulk of the new structure seemed to be made up of a stroma of very dense connective tissue, in the meshes of which were held blood-vessels, nerves (?), lymphatics, and masses of connective-tissue cells. The exudation of coagulable lymph described by Mr. Manson was noticed, but to a very limited extent.

◆

REPORT OF THREE CASES OF ABSCESS OF THE BRAIN.[1]

BY J. T. ESKRIDGE, M. D.,

Physician to the Howard and St. Mary's Hospitals.

Case II. *Abscess of the Brain following Chronic Meningitis; Sudden Death.*

On the notes of Dr. Dennis the history of the following case is based: —

Mr. G. S., aged fifty-six, German, shoemaker, served in the German army, and when a young man led an irregular life. He presented no marks of syphilis, and no history of his having suffered from that disease could be ascertained. He had always been a moderate drinker of beer, but never indulged in the stronger alcoholic liquors.

He was a large, heavily built man, and, with the exception of occasional headaches, had enjoyed good health until the latter part of the year 1880, when the loss of his wife, followed by other domestic unhappiness. seemed sufficient to disarrange an already illy-arranged nervous system. His temper had been irritable for many years, but now he became subject to frequent outbursts of passion, during which he would vent his spleen on any one who chanced to be near him. His memory became very treacherous, often getting confused in his business, and even at times being unable to remember the day of the week. His headache became constant and more severe.

During the spring and early part of the summer of 1881, he had what he called "rheumatic attacks," during which, while attending to his usual duties, he would be seized suddenly by a sharp pain in the course of the left sciatic nerve, followed by immediate paralysis of the left arm and leg, compelling him to sit down to save himself from falling. During the attacks he did not lose consciousness. The paralysis never lasted longer than a few minutes, power of motion returning and seeming to be as good as before the shock. The frequency of the hemiplegic seizures, two or three attacks often occurring weekly, depended upon causes giving rise to outbursts of passion. Sudden changes of weather were apparently associated with the nervous disturbance.

His symptoms remained unchanged until the latter part of October, when, in a fit of anger, he fell to the floor, frothed at the mouth, and became convulsed. No paralysis followed the convulsion, but the headache steadily increased, compelling him to take to his bed. As on this, so on every succeeding day during his entire illness, he remained in bed only a portion of the day.

The head-pain, now constant, was so severe that it prevented continuous sleep, and from short naps which he would occasionally get he would be awakened suddenly by violent exacerbations of pain.

He was attended by homœopathic physicians until November 12th, two weeks before his death, when Dr. Dennis was requested to take charge of the case. His temperature at this time was 99.5° F.; pulse 70 per minute, full and strong; respirations natural; appetite capricious, tongue coated, stomach intolerant, and bowels obstinately constipated. Urine scanty, high colored, and free from albumen, was voided voluntarily until a short time before his death, when it was occasionally passed involuntarily. The skin was slightly jaundiced. He complained of occasional chills, and was very sensitive to changes in the atmosphere. Nocturnal delirium soon began. He was very restless, saw strange things and people in his room, and would occasionally rise during the middle of the night and awake the whole family, telling them that it was time to get up for the day. At times his mind seemed to be a blank; he could not tell the day of the week, and would frequently be unable to distinguish day from night. On other occasions his mind was clear, but during these lucid intervals he could converse intelligently and connectedly for a few minutes only, thought suddenly ceasing to be generated, when a vacant stare would be his only reply to questions which a few minutes before he had answered promptly and correctly. Impressions were persistently and obstinately adhered to, and any attempt at persuasion to the contrary was not calmly received. His headache, principally frontal, and right-sided, was now sharp and lancinating, requiring hypodermic injections of morphia and atropia to relieve it. The orbital and other branches of the fifth nerves were very sensitive to pressure. His temperature during Dr. Dennis's attendance, though usually above the normal, reached 100° F. only on two or three occasions. The muscles of the left arm and leg were decidedly weaker than those of the right, yet sufficiently strong in the leg to support his weight for a short time. Turning in bed was difficult. When the left arm unaided was held at right angles with the body a decided muscular twitching began. Occasional muscular twitchings took place when the arm was passive.

He thus continued, gradually getting worse, until November 25th, about five weeks after his giving up work, when Dr. Dennis requested me to see him in consultation.

When I first entered the room he seemed bright, and conversed intelligently. He had not talked long, however, before he began to hesitate in his answers, appearing to have difficulty in understanding me, and being more puzzled in framing answers to my questions. Soon he was unable to form more than one or two words of a sentence, and finally uttered a meaningless "yes" or "no," or stared vacantly, when spoken to. Pupils were small and equal in size, brows were contracted, and he complained of great pain in his head. The eyes were very sensitive to light, making it extremely difficult to make an accurate or satisfactory ophthalmoscopic examination. The acuteness of vision and the condition of the other special senses could not be ascertained. The retinæ were found to be slightly hyperæmic, and the optic disks somewhat swollen. No muscle or groups of muscles were paralyzed, but those of the left arm and leg were weak, and an attempt at coördination produced a muscular tremor. The left side of the face was apparently less expressive than the right. The heart, lungs, liver and kidneys showed no evidence of disease. Temperature was 100° F.; pulse 68, and full; respirations 16 per minute.

---

[1] Concluded from page 128.

An opinion was given that the man was suffering from chronic meningitis of months' duration, and that a recent complication of softening or abscess of the brain had taken place.

As Dr. Dennis had enjoined rest in bed, and was doing everything necessary for the comfort and welfare of his patient, no change in treatment was made.

The next day Mr. S. was feeling so comfortable that he got up, dressed himself, and without assistance went down stairs from the third to the first floor to dinner. After eating he was helped to his third story room. He expressed himself as feeling tired and sleepy, and lay down to rest. He was left alone about one hour, when one of his daughters looking in his room found him on the floor, where he had fallen in getting out of bed. The left side was now found to be entirely paralyzed. He was placed in bed and left alone. Shortly after this, when looked after, he was found asleep and snoring loudly. As his repose was supposed to be a natural one, he was not immediately disturbed. About six P. M. the daughter, thinking it strange that nothing was heard from her father, went into his room and endeavored to arouse him, but to her surprise found him dead.

Fig. 5.

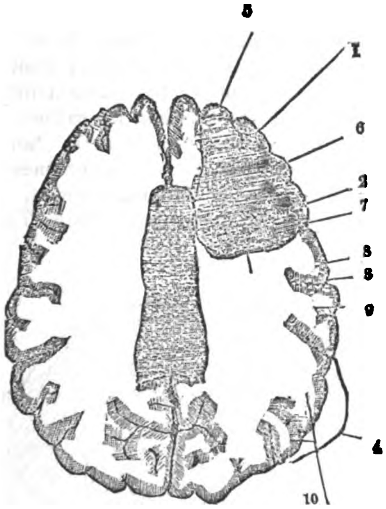


Fig. 5. Abscess as seen by a longitudino-horizontal section on a level with the corpus callosum. The numbers represent the same parts as in Fig 3.

Post-mortem examination thirty-six hours after death.

Brain. The dura mater over the entire extent of its bony attachment, was inflamed and firmly adherent to its osseous envelope. At the base of the external membrane was so closely attached that it could be separated from the bone only in piecemeal by the scalpel. The cranial nerves were apparently uninvolved in the diseased process. No abnormal quantities of fluid were found in the subarachnoid space. The blood-vessels of the pia mater were engorged, and the membrane was slightly adherent to the brain substance. The entire external surface of the brain appeared nearly normal, presenting no gross lesions of softening. Superficial portions of convolutions in the neighborhood of the greatest amount of inflammation were examined under the microscope, and found to be in nearly a normal condition.

An abscess was found on the right side involving chiefly the centrum ovale of the pre-frontal region, but also to some extent, in its middle part, the inner layers of gray matter of the first, second, and third frontal convolutions. On attempting to localize exactly the posterior limits of the abscess, it was found that a vertico-transverse section through the anterior lobe made just in front of the pre-central fissure externally, and striking the anterior extremities of the ganglia internally, just grazed its posterior limits. The abscess extended forward to within one inch of the anterior extremity of the lobe. Very few, if any, of the white fibres from the ascending frontal convolutions were involved. At the posterior and interior boundaries of the abscess a bloody nodulated mass two thirds of an inch in its greatest dimensions was found. Other portions of the brain were apparently healthy. No emboli or thrombi were found.

Fig. 6.

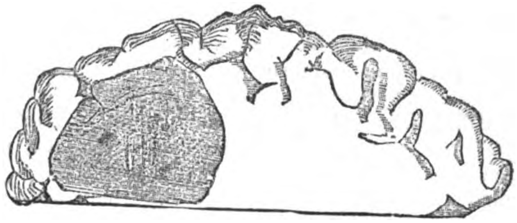


Fig. 6. Abscess (shaded) as seen by a vertico-longitudinal section made a little externally to the basal ganglia through the cortical substance and centrum ovale of the right hemisphere.

The abscess did not communicate with the lateral ventricle, nor open upon the external surface of the brain to account for sudden death.

Microscopic examination of the nodulated mass and adjacent parts showed no new cell formation tissue; the nodule and the parts around exhibited nothing besides disintegrating brain tissue with its blood-vessels, and a few blood corpuscles.

Remarks. We cannot boast of our knowledge of the functions of the antero-frontal lobes, yet pathology, and, later, physiology, have from time to time thrown some light on this obscure subject. The "crow-bar case" of Bigelow, the bullet wound related by Trousseau (quoted by Ferrier), the other cases mentioned, analyzed by Charcot and Pitres,[1] the tumor of the right antero-frontal lobe presented to the Pathological Society of Philadelphia by Dr. C. K. Mills,[2] and the lesion just described in connection with Case II. of this paper, in all of which the antero-frontal lobe was destroyed to a greater or less extent without any paralysis attributable to the lesion in this region, lead us to accept the conclusions of Charcot and Pitres, that motor disturbances of the slightest character do not necessarily follow lesions in the antero-frontal regions.

---

[1] Reviewed by Ferrier and quoted by Mills, Philadelphia Medical Times, January 18, 1879.

[2] Transactions of Philadelphia Pathological Society, vol. ix., p. 106.

For the light physiology has shed upon the function of this region of the brain I quote from Dr. Mills's article on tumor of the brain :[1] "Ferrier,[2] in his experiments on the antero-frontal regions of the brain of the monkey, generally obtained negative results. Electrical irritation usually caused no special manifestations. Removal or destruction was not followed by any definite physiological results. The animals operated on, however, while not actually deprived of intelligence had apparently lost the faculty of attentive and intelligent observations. When considering the hemispheres physiologically, Ferrier argues also that the power of fixing the attention and concentrating consciousness depends on inhibition. He shows that if the centres of inhibition, and thereby the faculty of attention, are weak, or present impulses unusually strong, volition becomes impulsive rather than deliberate."

It will be remembered that the patient in Case II., where the lesion was in the antero-frontal lobe, presented symptoms in accord mainly with the physiological experiments of Ferrier. The man was emotional and passionate, and his power of attention was weak and of short duration. He seemed at times to lose will power. Only temporary paralysis was observed, and this always after some fatigue, which may have induced some restraining influence from other portions of the brain, or, what is probably more correct, as some of the fibres connecting the motor region of the brain with the muscles of the arm and leg were destroyed, the remaining healthy fibres became exhausted from overwork.

Among the other interesting features of the second case are the sudden death and the patient's ability at times to walk well, although at others the paralysis was so extensive that he was not able to stand.

That he was able to walk at all was apparently due to the fact, sustained by the post-mortem examination, that not all of the fibres through which motor impulses passed from the brain to the muscles of the leg were involved in the destructive process. When he was resting a few fibres, for a short time, could do the work of a greater number.

If this view be correct it will enable us to explain the cause of sudden death, although there was neither hæmorrhagic apoplexy nor bursting of the abscess into the ventricles or on the surface of the brain. The unusual strain that he put upon his crippled brain a few hours before his death in descending and ascending two flights of stairs, and in sitting up to eat his dinner, so exhausted his nerve centres that its effects came like a shock from a severe cerebral hæmorrhage. The occurrence of the hemiplegic seizures may be accounted for, probably, by the sudden overloading of the congested vessels of the brain during his fits of anger.

Case III. Abscess of the brain; gangrenous inflammation of the right sylvian artery, and occlusion of some of its branches; facial erysipelas; pneumonia in the left lung.

J. R., male, aged about forty, laborer in a sugar refinery, had been sick and delirious for several days, was brought into the St. Mary's Hospital during the past winter in an unconscious condition. His previous history could not be ascertained. His respirations were rapid and abdominal; pulse small, weak, and irregular; temperature not taken. No urine was obtained for examination. His face was swollen and of a dark erysipelatous hue. The swelling around the eyes was too great to admit of an examination of the pupils. The facial swelling and comatose condition prevented the detection of local palsies, if such existed. He did not regain consciousness, but died about six hours after his admission.

Autopsy eight hours after death. The abdominal cavity was not opened. The entire left lung was in the second stage of pneumonia; the right lung and the heart were in nearly normal conditions. Only slight quantities of serous fluid were found in the pericardium and right pleural sac; considerable fibro-serous effusion was found in the left pleura.

Brain. The dura mater was slightly congested, but there were no evidences of decided inflammation in it. The pia mater covering the convex surfaces of both hemispheres and that beneath the right was opaque. Its blood-vessels were highly engorged, and deposits of lymph and pus were found. At and just posterior to the right sylvian fissure there was a considerable quantity of pus, and sufficient lymph to so mask the structures at this point as to make them look like one mass of inflammatory products. The trunk of the sylvian artery was almost black, its calibre lessened, but apparently not entirely obliterated. Some of its secondary branches, especially the lower ones from the parieto-sphenoidal and sphenoidal arteries, were occluded and seemingly gangrenous (Fig. 7). After carefully removing the pia mater the convolutions and brain substance of the left hemisphere appeared nearly normal. The under and external surfaces of the right temporo-sphenoidal lobe from its anterior tip to its junction with the occipito-parietal lobules were softened to the depth of about an eighth of an inch. A superficial abscess or a mass of softened brain substance, about one inch in all its dimensions, occupied the an-

Fig. 7.

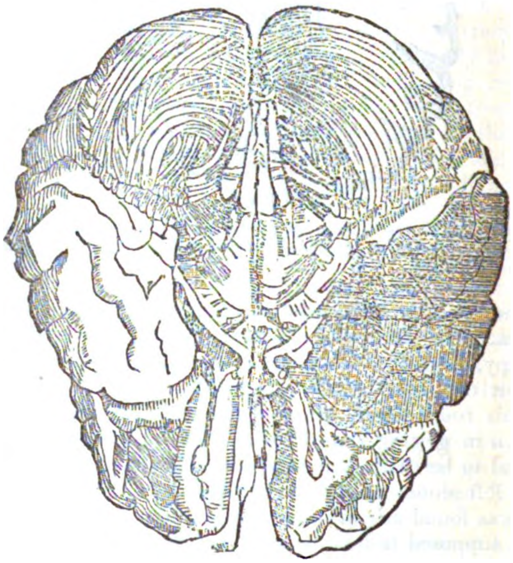


Fig. 7. The dark portion of the right temporo-sphenoidal lobe denotes the seat of the abscess, the shaded portion of the same lobe the softened (superficial) surface.

---

[1] Philadelphia Medical Times, January 18, 1879.

[2] Functions of the Brain, page 230.

terior extremities of the first, second, and third temporo-sphenoidal lobules. The contents of the abscess were, in the centre, a watery fluid, surrounded by broken down brain substance and blood constituents, and on the outside a thick layer of pus and other exudative matter.

The cranial nerves were but little encroached upon by the inflammatory deposits. Nothing special was noticed in the sinuses of the brain besides their blackened and engorged appearance. The ganglia were apparently normal.

The patient was not seen by me during life, and he was under the observation of Dr. Strittmatter, the resident physician of the Hospital, only six hours before his death. The circumstance of his death was investigated by the coroner, which necessitated great hurry in examining the brain and its membranes and sinuses. The consideration of the cause of the abscess and meningitis, and the nature of the eyrsipelas, I shall leave for those who may take part in the discussion.

[After the reading of the preceding paper, DR. CHARLES K. MILLS said:—]

A careful examination of the cerebral sinuses might have thrown some additional light upon the third case. It was of great importance in all cases of abscess of the brain to investigate the condition of the sinuses of the dura mater. Abscess and thrombosis were not infrequently associated, and sometimes held to each other a causative relation. In the account of the condition of the patient (Case III.) it was stated that his face was swollen, and of a dark erysipelatous hue, the swelling around the eyes being too great to admit of an examination of the pupils or of the interior of the eyes. The eyrsipelatous appearance may have been the pseudo-eyrsipelas which accompanies some form of cerebral thrombosis. The ophthalmic veins end in the cavernous sinuses. These veins have also a communication with the veins of the face. The facial vein, beginning on the anterior portion of the head, descends about the middle of the forehead, as the frontal vein, to the root of the nose, and then is continued downwards around the angle of the eye, under the name of the angular vein.

This angular vein communicates with the ophthalmic vein. Hence it will be seen how swelling of those veins outside of the skull, which inosculate with the sinuses within, may become the most striking and positive signs of obstruction of the sinuses. Œdema of the eyelids and face, and congestion of the eyes, mean venous stasis in the parts drained by the ophthalmic veins.

These phenomena were present in Dr. Eskridge's third case.

These three cases of abscess of the brain, well studied and described, constitute a valuable addition to the literature of intra-cranial diseases.

GIRL graduates! They realize
Our Tennyson's old fancies,
And, winning academic prize,
They scorn seductive dances.
Here come the feminine M. D.'s,
Of physic fair concocters,
Who write prescriptions with such ease,
The "violet-hooded doctors." *Punch.*

Reports of Societies.

PROCEEDINGS OF THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

MAY 20, 1882. DR. R. M. HODGES, presiding.

FIBRO-MYOMA UTERI.[1]

DR. J. W. ELLIOT read a paper entitled Fibro-myoma Uteri; Dysmenorrhœa for fifteen years; Enucleation; Recovery.

DR. G. H. LYMAN opened the discussion by mentioning a case where a small fibroid of the cervix had given rise to intense pain during menstruation. Entire relief followed its removal and pregnancy soon ensued. Dr. Lyman also spoke of the connection between the relation of the tumor to the uterine walls, and the amount of hæmorrhage, the nearer to the peritonæum, the less the hæmorrhage. Dr. Lyman had for some time held the theory that the hæmorrhage was largely due to a venous stasis caused by the contraction of the internal os; he had previously called the attention of the Society to the great value of dilatation of the cervix as a means of arresting hæmorrhage, and had since found no reason for abandoning his theory.

In regard to the use of sponge tents Dr. Lyman had not supposed they were still in use in this locality; they are to be condemned as a general rule, sea tangle or tupelo tents being preferable.

DR. BAKER thought the only criticism that could be made on the reader's management of a very difficult case was in regard to the use of a third series of tents. It was Dr. Baker's custom, if a sufficient dilatation was not gained by the second series, to wait a few days, and commence again; but never to introduce a third series. A point to be remembered in the use of tents was the tendency on the part of the uterus to force it out beyond the internal os; it was often necessary either to tampon or to fasten the tent by a stitch through the cervix. Dr. Baker advised strongly against the method of treatment by ergot, and frequent dilatation with incision of the cervix, as compared with the operation employed by Dr. Elliot.

The difficulties of removing a small tumor from the fundus of the uterus are very great, and can only be appreciated by one who has tried it.

DR. ELLIOT agreed with Dr. Lyman in regard to hæmorrhage being often caused by venous stasis, but thought it was also often due to a hyperplastic degeneration of the mucous membrane, in which case he would hardly expect a cure from dividing the cervix.

With regard to laminaria, Professor Schultze, of Jena, has used them with antiseptic precautions in one thousand cases, with only five resulting cases of parametritis. Cohn objects to their use because the fresh weed easily putrefies, and that they do occasionally become septic in water.

In reply to Dr. Baker, Dr. Elliot thought the great danger in the use of tents was from septic poisoning. The mere dilatation of the uterus is physiological. The danger comes from using septic materials in tents which is taken up by the veins and lymphatics with the result of septicæmia or parametritis, which may be slight, or may go to septicæmia or pyæmia, or may not be severe enough to bring about a general septic condition or even local suppuration. If then, the tents are thoroughly aseptic, what harm in using a third or a fourth series or enough to dilate sufficiently? It is not of course a thing to do rashly, but it does not seem to Dr. Elliot a thing to shrink from if dilatation were necessary. Dr. Baker's dread of dilating is perhaps founded on experience from sponge tents. If the dilatation had been performed by sponge tents, Dr. Elliot would agree. But Dr. Elliot objected to the use of sponge tents for reasons given in the paper.

---

[1] Vide page 151 of this number of the JOURNAL.

After a general discussion as to the relative meaning of the words parametritis and cellulitis, DR. F. B. GREENOUGH presented a paper entitled

THE RATIONAL AND ROUTINE TREATMENT OF VENEREAL DISEASE.[1]

DR. POST asked if the reader would include excision of the primary lesion with the cautery.

DR. GREENOUGH answered yes.

DR. POST mentioned that of the large number of cases seen by him at Chelsea, the character of the primary sore was almost always masked by the use of "blue-stone," which is so universal among seamen.

DR. LANGMAID expressed his surprise at the sweeping strictures of the reader on caustics, for while agreeing in the main, his own experience had given him great faith in the application of nitric acid and acid nitrate of mercury. He believed he secured better reetshʇlnsn with iodoform, and avoided the disagreeable smell of the latter, often a matter of great importance. The pain from the application of the acid nitrate of mercury was at first severe, but could be very much controlled by the preliminary application of carbolic acid.

In regard to the so-called secondary and tertiary ulcerations of the mouth and throat, Dr. Langmaid dissented from Dr. Greenough. He found in these cases great good to result from the occasional application of acid nitrate of mercury, together with constitutional treatment. He had seen the most obstinate ulcers heal repeatedly under this method of treatment, and even the perforations of the hard palate, which are usually considered as hopeless.

In regard to the question of marriage, DR. GREENOUGH said that while he could not conceive of any combination of circumstances which would justify a physician in guaranteeing a patient who had had syphilis from the possibility of future relapses, he did think that in cases where treatment had been kept up for two years, and another year had elapsed without any relapse, the chances were decidedly against any manifestations of a specific nature either in the patient or his progeny. He thought that the number of cases of patients who, having had an attack of syphilis, went through life without ever hearing from it again, must be greater than formerly. Where, on the other hand, a patient has had relapses, he never can feel safe as to the future.

DR. PARKS asked if Dr. Greenough believed in a sympathetic gonorrhœal disease of the eyes that is not due to infection. The reader had never seen such a case, but it was described by older writers.

DR. WATERMAN asked if Dr. Greenough could give any statistics as to the spontaneous cure of syphilis.

The reader could not, but thought there must be quite a large number, judging from the very slight amount of treatment that many cases receive. In dispensary practice a large proportion of patients cease their attendance as soon as their symptoms have disappeared. He had known of cases where, from recklessness or carelessness, practically no systematic treatment had been followed out, and yet the disease seems to have been entirely eradicated.

Recent Literature.

Contributions to Practical Gynæcology. By S. JAMES DONALDSON, M. D. Trow's Printing and Book-Binding Company. Pages 130.

This little book contains two essays, written for the New York Medico-Chirurgical Society.

Part I. Practical Observations upon Uterine Deflexions. The first chapter contains a sharp criticism of the plates of the pelvic organs which are found in our text-books. Donaldson says with truth: "In many of these diagrams it would appear that the design was to adapt the pelvic organs to the conformation of some instrument."

Some of the diagrams in Thomas's book he finds especially incorrect and misleading.

Then follows a very good diagram by Donaldson, showing the various relations of the pelvic organs.

He next discusses prolapse and retroversion, for the treatment of which conditions he uses a modification of Cutter's external pessary, which is to be removed at night by the patient. He disposes of internal pessaries by saying: "Every physician is well aware of the uselessness of expecting any restorative benefits from an internal pessary worn constantly."

He offers no convincing evidence that this statement is true. He has, however, hit on a most interesting point; for now that gynæcologists can successfully relieve grave symptoms by the use of pessaries, the next problem is to get rid of the pessary without a return of the deformity. Their efforts, we think, are now aimed in the right direction, and we find skillful gynæcologists more and more successful in gradually diminishing the size of, and in finally removing, their pessaries. Next follows a very full discussion of uterine flexions, in which it seems to us that he attributes undue importance to them. In their treatment he uses an elastic intra-uterine stem, which is attached to a hard rubber vaginal part by an elastic band. The idea is by no means new, but his pessary seems more complicated and less possible of being kept clean than any we have seen. Donaldson seems to meet more cases requiring the stem than we are in the habit of seeing. We consider it necessary that a flexion should give rise to marked symptoms to require the use of an instrument in treatment which may cause most disastrous results.

External pessaries seem to us objectionable where internal can be used. The indications for stem pessaries are not yet clearly defined; but it is certain that they should be used with great caution.

Part II. Practical Observations upon Dysmenorrhœa.

This is the most valuable part of the book, and contains an interesting and full discussion of the causes and treatment of dysmenorrhœa. In cases due to flexions he strongly recommends the use of his stem pessary, and the article closes with careful directions for its use.

---

[1] Vide page 145.

Medical and Surgical Journal.

THURSDAY, AUGUST 17, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE PREVENTION OF SYPHILIS.

It is somewhat singular that in this country there should be carefully exempted from all regulation or repressive measures a single disease, or rather a set of diseases, and this not because of their insignificance, but simply because of their mode of communication. If a man have small-pox, he is hurriedly isolated, and all possible danger to his neighbors is carefully prevented. If he have the greater disease, he is at liberty to spread it as his ignorance or his wickedness may direct.

An important distinction between the two diseases lies in the fact that one is infectious and the other contagious; and the fact that the latter, being propagated only by contact, is most frequently transferred in the act of sexual connection, makes of it so low a thing that an American community cannot recognize its existence. But, unfortunately, shutting the eyes is not an effectual way of combating an evil; while the farmer slept, the weeds grew; and we do more than sleep. By positively ignoring the existence of syphilis we actually encourage its growth. If a woman have become diseased, we almost force her to infect others by denying facilities for treatment, and by exemption from hospital privileges, which, with equal persistency, we force upon others.

The more the disease is studied, the more numerous appear the ways in which it may be propagated. Cases of non-venereal syphilis may be said to be of every-day occurrence. Anything which is passed from one man to another, particularly anything which may be passed from one person's mouth to another's, may be the vehicle of contagion. The limit to the contagious powers of a syphilitic are by no means definitely settled. The difficulties in the way of its regulation are numerous, lying partially in the nature of the subject, but in great measure in the delicate sensibilities of the religious world, which refuses to consider so unsavory a subject. In this connection it is with especial pleasure that we mention the address of Dr. Gihon, of the United States Navy, on the prevention of venereal disease by legislation, read before the Medico-Legal Society last April. To it is appended the proposed act entitled An Act to prevent the Spread of Contagious Diseases, which we published on July 20th. Its noticeable feature was contained in the following: —

> Art. III. That the State Board of Health, with the approval of the Governor, and the Health Board of the city of ——— with the approval of the mayor of said city, shall have power to institute and carry out all suitable measures to prevent the spread of diseases of a contagious character, and may, if deemed advisable, remove to proper hospitals selected by them all persons suffering from contagious diseases, who, neglecting proper precautions, imperil the health of the community.

Firmly as we may believe in the curability of syphilis, its increasing mildness, or the gradual syphilization of the race, it is still a serious disease, and deserves serious attention. The proposed legislative control mentioned above we have little expectation of seeing adopted; at present such an attempt at regulation would probably be a failure, but as a contribution to the discussion of the subject it is an exceedingly wise one, drawing attention to the parallels between venereal and other contagious diseases. We know of no better way to attract the attention of thinking people.

◆

OBSERVATIONS ON AN EPIDEMIC OF RELAPSING FEVER.

An account is given in Virchow's Archives (vol. lxxxvii., Part 3), by Dr. Meschede, of an epidemic of relapsing fever which manifested itself in Königsberg, and lasted about fifteen months, — from the middle of March, 1879, till June, 1880. The account deals simply with the cases received at the Königsberg hospital and embraces 360 cases, of which 305 were men and 55 women, that is, about eighty-five per cent. men, and fifteen per cent. women. This is about the relative proportion of the sexes attacked in epidemics of this disease, as previously observed in Germany. An epidemic in Breslau gave eighty-three per cent. of cases of males, and seventeen per cent. of cases of females; and one in Danzig — both of these records, like that at Königsberg, being among hospital patients — gave eighty-seven per cent. among males, and thirteen per cent. among females. The far greater proportion of men than women attacked by relapsing fever is readily explicable by their greater exposure to sources of contagion as tramps in the country in search of work, and in the towns and cities, in the cheap lodging-houses, and especially in the police stations and prisons, which Meschede regards as the genuine breeding grounds of this disease in Germany. The term famine fever is not especially applicable to the disease, and only indirectly indicates its origin.

Of the total number attacked 133 were laborers, 113 apprentices, 23 servant girls, 18 messengers, etc., etc. The laborers and apprentices belonged, as a rule, to the peripatetic class. Two hundred and sixty-five of the whole number were unmarried, and more than half were utterly homeless. Half of the cases were between 18 and 30 years of age, and none of the patients were under 10 or more than 64 years of age. In other words the years of greatest vigor furnished the largest number of cases. Meschede concludes from his observations, therefore, that it is not deficient nutrition nor other deteriorating influences tending to lower the tone of the system, which cause relapsing fever, but solely and simply the contagium absorbed either by the respiratory tract, by cutaneous infection of excoriated surfaces, or conveyed by spirilla taken with food and drink.

The discovery of the spirochaete by Obermeier put an end really to the old idea of a famine fever. But though no longer to be regarded as immediate causes, want and filth, by preparing a favorable soil, are allies of the causative germ. Relapsing fever is rarely met with except among the ill fed and ill housed, but it can be even more positively asserted that relapsing fever is synonymous with the presence in the blood, at least at some stage of the disease, of the spirochaete of Obermeier, by inoculation of which the disease has been conveyed both to men and to animals. In evidence of the contagiousness of the disease even among the well-to-do, is cited its contraction by the physician, three nurses, and an attendant at the hospital at Freiburg, in Saxony, during an epidemic in 1879; by five out of eleven nurses at the Danzig hospital; and by two physicians and three nurses at the Königsberg hospital.

During the height of the epidemic of relapsing fever typhus fever broke out among the Königsberg patients, and attacked, among others, four of the convalescents in the hospital from relapsing fever; the latter disease, on the other hand, attacking two patients just convalescent from typhus fever.

The general features of the malady, as observed by Meschede, reproduced very accurately the excellent descriptions of Griesinger and Obermeier. The number of relapses were as follows in these cases: 5 relapses in 2 cases, 4 in 7 cases, 3 in 107, 2 in 120, 1 in 58 cases; the balance of the cases took a very mild or abortive course, except 14, which are reported under the head of bilious typhoid, a term which we regret Griesinger should have introduced, believing it to be simply relapsing fever with hepatic complications. The mortality was seven per cent., about an average mortality, and in most cases death was preceded by some serious complications, pneumonia being especially common. Death most frequently occurred in the remission following the second attack. Lebert, in his article in Ziemssen's Cyclopædia, places it usually during the second attack itself. The average duration of the various attacks were as follows: first attack, seven to six days; second, five to four days; third, four to three days; fourth, two to one day; fifth, one day. The average duration of the intermissions were, first intermission, seven to eight days; second, nine to ten days; third, eleven to twelve days. The attacks decrease, and the intermissions increase in duration as the disease progresses. On these points Meschede coincides with previous observers. In sixty-four per cent. of his cases the highest temperature was observed at the end of the second attack, just before the second intermission.

The spirochaete was almost constantly found in all the attacks, though only by the use of powers magnifying five hundred to one thousand times; in some preparations the spirochaete remained alive for days, continuing their movements; in all cases of bilious typhoid without exception the spirochaete were encountered, and in several of these cases a very large spleen was found. Meschede does not say how many, if any, of his cases were distinct repetitions of the disease.

Relapsing fever has never succeeded in gaining a foothold in America, its rare invasions of our Atlantic seaports having been of temporary duration, but we are liable to a repetition of them at any time in a more serious form, and we should be familiar with the latest observations of those, unfortunately, compelled to be better acquainted with this disease. Moreover, the discovery and thorough authentication of the spirillum or spirochaete as a prominent feature, and, without much doubt, the immediate cause of the symptoms, render it an especially interesting malady in this germ-seeking age.

MEDICAL NOTES.

— Amongst the ample stores to be sent from England to Egypt are four steam ice-machines, the use of which will be taught to members of the hospital corps. Every field hospital will have its ice box, which will be filled with fresh ice every day.

— The New Sydenham Society announces for publication a translation of Billroth's Clinical Surgery: Extracts from the reports of Surgical Practice between the years 1860 and 1876.

— The following item makes us fear that the *Boston Advertiser* is lacking in faith: "The young woman of Lawrence who was reported cured of hip disease by prayer at Old Orchard last week is still obliged to use a crutch."

— The remains of the anatomical subjects of Paris are hereafter to be cremated.

— Among the inducements to subscribers in the *Strict Constructionist* is the following: "To physicians: No medical advertisement will be received into these columns, either of books, drugs, or doctors; furthermore, as the proprietor has been through the regular Harvard medical course, it need not be said that the paper will be able to see both sides of certain unpopular controverted topics."

— At a meeting of the Medico-Chirurgical Society of Montreal, Dr. Shepherd, Demonstrator of Anatomy at McGill College, read a paper on a hitherto undescribed fracture of the astragalus, and exhibited three specimens from dissecting-room subjects. The portion fractured was the process external to the groove of the flexor longus pollicis muscle, to which the posterior fasciculus of the external lateral ligament of the ankle-joint is attached. Dr. Shepherd thought that it was produced by extreme flexion of the ankle with a twist of the foot outwards, and was probably one of the lesions which occurred in severe sprain. He suggested that it might account for some of the cases of severe sprain which recovered with impaired movement of the joint. The union was fibrinous. He had not been able to produce the fracture experimentally. At a subsequent meeting, Dr. Shepherd showed a fourth specimen in which there was bony union. There was no history to any of these cases. — *Philadelphia Medical News*, June 10th.

— The *British Medical Journal* relates a novel method of assault upon a member of the profession. At about eleven o'clock at night, a respectably dressed woman called at the residence of Dr. Whitelaw, and stated that he was wanted professionally half a mile beyond the burgh. After interrogating the woman, Dr. Whitelaw, of Kirkintilloch, at once accompanied her. On approaching a secluded part of the road, he was suddenly set upon by two men and knocked down, one of them inflicting a severe kick upon the ankle, splintering the bone and dislocating the ankle-joint. His assailants at once proceeded to rifle his pockets, the woman assisting to hold him down. Fortunately, the only property Dr. Whitelaw had about him was a pocket-thermometer, a pocket-knife, and 7½*d.* in cash, as he had fortunately laid aside his gold watch and chain. When the thieves discovered that this was all that he had, they threatened to shoot him, but finally decamped, leaving their victim lying in the road. After a time, he managed to crawl a distance of about three hundred yards, where he got assistance and was carried home. Much sympathy is naturally felt for Dr. Whitelaw, who is highly esteemed in the locality. How much sympathy he would have received had he refused to take such a walk with a stranger can well be imagined.

— The Report of the Select Committee of the House of Lords to inquire into the state of the law relating to the Protection of Young Girls, establishes the fact of the existence of a trade in girls between England and Belgium for immoral purposes. The committee also prove that juvenile immorality is alarmingly on the increase, and that cases are known of children following the professon of prostitutes from an incredibly early age. They recommend that the age of irresponsibility in girls should be raised; that persons shall be guilty of a misdemeanor who harbor girls under seventeen for immoral purposes; that girls under sixteen soliciting in the public streets shall be sent to industrial schools; and that the enforcement of the law shall be more rigorous in the case of street-walking.

— Professor Walley, of Edinburgh, addressing a veterinary association in a northern county (*Veterinarian*, July, 1882), related the following instance of the milking qualities of a cow well advanced in tuberculosis: "During the course of my periodical inspection of the Edinburgh byres, I observed in one of them a short-horn cow showing unmistakable symptoms of advanced pulmonary tuberculosis, with extensive tubercular mammitis. I asked incidentally if the cow gave any milk, and was told that she gave three quarts at each meal; and on trying the udder I found it was then tolerable full. A few days after I again visited this cow, and found her almost *in extremis* from dyspnœa, induced by concurrent emphysema pulmonum, still giving, however, a large quantity of milk. The owner, acting on my advice, had her slaughtered; and the autopsy revealed almost universal tubercular invasion of both lungs, and of the left half of the udder."

NEW YORK.

— The recent hot weather, as was naturally to be expected, has been telling very materially on the death-rate of the city. During the week ending July 29th, the mortality reached the high figure of 1217 (the majority of the deaths occurring in children under five years of age); and this was the greatest during any one week since the summer of 1872, when in that ending July 6th, there were 1591 deaths, 212 of which were from sun-stroke. Small-pox was also epidemic in the city at that time. In the last week of July for the past five years the death-rate was in 1881, 882; 1880, 654; 1879, 636; 1878, 732; and 1877, 650. The highest mortality in any one week in 1881 was during the week ending August 9th, when the number of deaths was 1144. During the month of July just past the total deaths were 3893.

It is unfortunate that the appropriation made for the expenses of the extra corps of physicians who systematically visit the tenement-house districts with a view of alleviating the condition of the poor, and especially of looking after the health of the children during the hot weather, is not sufficient to keep them on duty during the entire months of July and August, instead of for only five weeks, as is at present the case.

This year they did not commence their work until the first of August. The general report of the physicians at the end of the first week of their work was that they had found the sanitary condition of the city better this year than for some time before, and that the population of the tenement districts were more alive to the necessity of cleanliness. There were also fewer cases of contagious disease than usual discovered. Most of those met with were in the southeastern portion of the city, in the vicinity of the Bowery, and the appointment of a special inspector for this district was urged by the physician in charge.

Miscellany.

GAETANO VALERJ.

AMONG the star-bearing names in the annual record of the Massachusetts Medical Society, just published, is that of Gaetano Valerj, of Rome, Italy, an honorary member of the Society.

Though late, it is still fitting that this distinguished physician and eminent man should receive here and now our tribute of affection, and that a short sketch of his life and character should be presented to his many and grateful friends in this country.

Professor Commendatore Gaetano Valerj, M. D., for such were his principal titles, was born in Loreto, Northern Italy, January 18, 1818, — the son of Cavaliere Domenico Valerj, a noted civil engineer of that city. He died at Rome, after a short illness, February 12, 1882, "fra i conforti della Religione."

In his first studies young Valerj was educated at Osimo, in a college conducted by free secular priests, a body of men whose large and liberal spirit accorded well with the tendencies of the times, and assisted much in making Osimo a centre of attraction to men of learning and science.

Thence, leaving college with high reputation, Valerj went to Rome to devote himself to medical studies at the University and clinics of that city. At Rome he greatly distinguished himself, carrying off the "laurea onorifica," and gaining, by *concours*, the post of assistant in the Faculty.

Having completed his university course, Dr. Valerj went to France and to England, where he assiduously attended the hospitals and clinics, especially at Paris and London, for nearly two years; and gained the permanent personal friendship of Trousseau, Nélaton, Bright, Watson, Brodie, and other eminent men. In this, and in two subsequent similar visits, he showed his ever ardent desire to keep himself fully abreast with the most recent advancements in science and practice.

Among his earlier appointments was that of physician-in-chief to Sto. Spirito Hospital; and when, after twenty-five years of service there, he felt compelled, on account of enfeebled health, to send in his resignation, the place was kept open for him for two years, in the hope that he might be able to again resume it.

Through the efforts of Dr. Valerj a chair of pathological anatomy was established in the University, and he was chosen its first professor. After twenty-four years he gave up this professorship for that of clinical medicine, and a few years later passed to that of hygiene, which also he had instituted.

As a teacher he was at once learned and truly popular; and in all matters of medical science, ancient and modern, he was looked up to as authority by professors, students, and practitioners.

As a medical man, thorough investigation, unsparing labor, and extreme caution, were his leading characteristics in solving the mysteries of disease. He belonged to the observant, progressive, expectant class, somewhat "nihilistic," perhaps, in full agreement with his favorite author, Baglivi, whom he calls the Roman Hippocrates, and whom he quotes as saying that "Nature, not drugs, cures diseases," that "physicians and remedies, to be useful, must accord with Nature," and that "by neglect of this doctrine patients are now martyrs to drugs and medicines." He had rivals, opponents rather, some not over scrupulous, as every man actively independent of traditional dogmas must have, but never a personal enemy. He put a high estimate on his calling, and felt the degradation brought upon the profession by the mercenary methods of some practitioners, in view of it declaring to a friend that he regretted that the duty of providing for his own ever compelled him to accept pecuniary compensation.

As a practitioner he was considered eminently successful, and had the unreserved confidence of his fellow-citizens and foreigners alike. In a marked degree the poor and the oppressed always found in him a benefactor, friend, and cheering attendant.

With Americans visiting Rome Dr. Valerj was an especial favorite and a greatly beloved physician. Nor was this partiality unreciprocated. Many, very many, can attest to his unselfish devotion and constancy.

He was made a member of the Philadelphia Medical Society at the instance of a prominent physician of that city, who had in his own person experienced the kind offices and skillful attendance of Dr. Valerj. In 1860 he was chosen honorary member of the Massachusetts Medical Society, a compliment which he greatly valued, and which he responded to in a learned exposition of his faith and practice. Having himself translated this paper into English, it was published in the Boston Medical and Surgical Journal.

Professor Valerj was unanimously chosen Rector of the University of Rome, and repeatedly re-chosen until ill health obliged him to decline further reëlection. On one occasion he was also elected President of the Faculty, an office which, being already Rector, he could not accept.

The King of Italy honored Professor Valerj, at first with the insignia of the "Croce d'Italia," and then with the order of "SS. Maurizio e Lazzaro." After this the higher title of Commendatore, with its broad ribbon, was conferred upon him.

In the many difficult positions which these honors and appointments, especially that of Rector, placed him, Professor Commendatore Valerj acquitted himself with marked success and approbation, harmonizing, by his prudent acts and apt words, conflicting elements, which, on various occasions, notably that on the death of King Victor Emmanuel, might have endangered the public peace.

In a word, ever wise and kind, Valerj was a true and faithful son, a most perfect and loving husband, a devoted father, an exemplary citizen, a true friend and benefactor of the race. His death, sudden and unlooked for, was publicly announced as "a great grief in Rome;" and the municipality of Loreto, his birthplace, sent up a most touching telegram of sorrow and affectionate regard.

His funeral, it is written, was a splendid ovation of love and esteem. He was followed by men of all nations and creeds, and deeply lamented by all classes who, from the highest to the lowest, had known and admired his beautiful character, his Christian benevolence, his love of labor and science. The cords of the hearse were held by the Minister of Public Instruction, a Senator, a colleague, and the Rector of the University. At the cemetery several addresses were made. Professor Mazzoni, the eminent surgeon, a friend and colleague, spoke, as translated from the Italian, the following words over the grave: "Before the earth covers you from sight, accept, gentle spirit, the affectionate but heart-rending farewell of friendship. Let me recall, to myself and the many who stand around, your great virtues. Illustrious and learned in your teachings, successful and most sympathetic when by the pillow of suffering, you leave among your colleagues and disciples the longing after your advice and instruction. By a unanimous vote of the Faculty, Rector for many years of the University of Rome, you bore the name of 'Magnifico.' By quieting all discord you initiated an epoch of peace. To all who made appeal to your justice and goodness you were ever wisest and most kind. Most affectionate of fathers, sparing neither fatigue nor sacrifice for the education of your sons, they, with your bereaved wife, your afflicted young daughter, and the saddened and venerable grandmother, cannot console themselves, — remembering your constant care, your tender voice, your unfailing love, and knowing that your fond heart will never again in this world respond to theirs. And Rome herself in your death deplores the loss of a most intelligent, upright, and beneficent citizen. Dead, no! You are not dead! The remembrance of your excellent virtues will ever remain deeply engraved on our hearts. We will guard it as a treasure, that it may stand as a noble incentive to posterity." B. E. C.

LETTER FROM PORTLAND.

MR. EDITOR, — Though the medical history of this State presents nothing very startling for the past six months, there have been several events which are not unworthy of record in the JOURNAL.

Early in the year Dr. Harlow, who has been superintendent of the Maine Insane Hospital at Augusta for many years, presented his resignation. The propriety of this step need not be discussed here, as this question was considered in these columns a year ago; but it may be said that the resignation was accepted, and the grief expressed by the public and the profession was not of the kind that findeth no consolation. Immediately applications for the vacant position began to pour in, — some from men who have devoted themselves to the study and treatment of mental disease for years; some from physicians whose acquaintance with insanity is of the scantiest. There was no immediate appointment, however; but it was given out that a final selection would be made at the quarterly meeting of the trustees in June. Expectation in the profession was on tiptoe to know just what would be done, for the affairs of the Hospital have been so much talked about for a few years past that the interest in the election was quite general. Great, therefore, was the amazement of doctors and doctored at reading in the papers the morning after the trustees' meeting the dispatch from our capital announcing that the choice had fallen on a gentleman who had never been thought of as even a possible candidate; one whose taste and talent had for a generation found grateful scope in the practice and teaching of general medicine, and whose abandonment of a pleasant and extremely lucrative business for what most consider a disagreeable specialty, with a meagre salary, would be regarded by many as sufficient evidence that he should be admitted to the hospital as a patient. His prompt declination and public statement that his name had been used without his knowledge or consent relieved the anxieties of his patients, who were greatly agitated at the thought of losing his ministrations, but naturally subjected the board of trustees to an amount and kind of criticism which cannot have been altogether gratifying. It was evident that the action was taken that the trustees might seem to have done something, — they elected an eminent practitioner who, as they very well knew, would not take the place on any consideration, and thus hoped to gain time without appearing chargeable with inaction. Just why they did not settle the business has not transpired publicly; but there are rumors that two of the trustees wanted the superintendency, and that, on this account, a sufficiency of votes could not be concentrated on any one applicant, although an alienist of character, ability, learning, and experience, was available. The action at the next quarterly meeting, in September, will be awaited with much concern by the profession, and the community, too, is keenly alive to the necessity of making the change a real improvement. The position is too important to be bandied about among politicians as a reward for party service, or to be bestowed upon any one who has not shown a special fitness for such a place.

The Medical School of Maine has had a season of great prosperity. The term was opened with an address by Professor Alfred Mitchell, who spoke very interestingly in defense of the American system of medical education, making a valiant stand for a method which of late has received some righteous and terrific drubbing. More than a hundred students were in attendance during the term, and twenty-eight were graduated. At the closing exercises a fine portrait of the late Professor Greene was given to the college by former pupils, Dr. J. R. Kimball, of Suncook, N. H., making an admirable presentation speech. Judge Symonds, of the Supreme Court of the State, made the closing address to the class, taking for his subject a comparison between the development of law and medicine, and treating the topic in a scholarly and charming manner all his own. The following changes have been made in the faculty: Prof. Stephen H. Weeks is transferred from the chair of anatomy to that of surgery; Prof. Frederic H. Gerrish will teach anatomy instead of materia medica and therapeutics; and Dr. Charles O. Hunt, superintendent of the Maine General Hospital, is elected professor of materia medica and therapeutics.

The Maine Medical Association held its thirtieth annual meeting in this city in June, the president, Dr. A. K. P. Meserve, occupying the chair most acceptably. There was a very fair attendance, some interesting papers were read, the hospitalities of the Portland members were never more generally extended, and the weather was beautiful all through the three days' session, and yet there was a wide-spread impression that the meeting was not a success. Several reasons have been suggested for this result, and each doubtless is entitled to consideration. The programme was not thought to be as attractive as usual, and really there did seem to be some force in the criticism. Very many were of opinion that too much time was devoted to certain specialties; and one could not regard the comment as altogether unjust, considering that, of sixteen reports and papers on medical topics, five were about the eye or ear. Another reason which probably served to keep away some who had hitherto been active and influential was the fact that, for some years past, certain members have persistently endeavored to drag their personal quarrels into the public meetings of the association, and have succeeded to such an extent as to waste a great deal of the valuable time of the Society, and to disgust those who want to devote the meetings to the legitimate objects of the organization. This year an effort was made to stir up strife, but it met with a cold reception.

The principal officers for the ensuing year are as follows: —

President, George E. Brickett, of Augusta; recording secretary, Charles D. Smith, of Portland; treasurer, Augustus S. Thayer, of Portland; chairman of the board of censors, Horatio N. Small, of Portland. Dr. Charles O. Hunt, who has served as secretary for the past fourteen years, declined a reëlection. Under his supervision almost everything that the Association has ever had printed has been published, and the annual volumes of the Transactions are lasting evidences of his fidelity and skill as recording officer and editor. In accepting his resignation, the Association tendered him its sincere thanks for his remarkably efficient services, and expressed much regret at losing him from his long-accustomed post. As one of the older members expressed it, "I shall feel homesick to see anybody but Dr. Hunt in the secretary's chair."

A resolution denouncing the new code of the New York State Society was passed with enthusiasm, the vote being taken by rising. But it is easy enough to call the devil a thief when a lot of fellows are around, less easy to decline his money when it is offered privately; and there are not a very few members of the Society in good standing who meet irregulars in consultation, apparently without compunction. Still, it is well that the immorality of those doctors in another State should be frowned upon as it was; vice which pays a tribute to virtue is not beyond salvation.

◆

MALARIAL DISEASES.

The last monthly report of the Connecticut Board of Health contains the following on malarial diseases: —

The most interesting feature in the renewed prevalence of malarial diseases is the difference of behavior in regions lately invaded and in those where it has been prevalent for some years. In the former the cases are quite often more numerous, and are clear cut cases of chills and fever, lasting a few days, and recovery complete, until, after a longer or shorter interval, another similar attack occurs. In the latter generally the cases are much less in number, but of a severer type or of a more chronic nature; the types are constant here if the frequency be nearly the same. Thus, in Hartford, we have one death from congestive chill, three from typhoid-malarial fever, a blending of the newer malaria with the indigenous typhoid, which form of malarial disease, although sometimes the first that appears, is more often an indication of the increasing strength of the typhoid type, and the decrease of the malarial. The variety called malarial fever is still a farther weakening of the distinctive periodic type; two deaths are reported from this form in New Haven, while in Meriden two deaths are reported from congestive chill, one from malaria, and one from typhoid fever. The increased frequency of typhoid fever has already been discussed, still its appearance side by side of malarial fevers of marked type is very peculiar.

The spread into new territory is steady, but not rapid nor uniform. It is interesting to watch the repetition of the now familiar phenomena which are characteristic of the appearance of malaria in new fields, and the processes by which it becomes established. There is no more interesting and important question for this part of the country than the ultimate cause of malaria.

Congestive chills are reported also from several other localities where malarial diseases have been prevalent for years, but the prevalent types in these regions are typhoid, malarial fever, dumb ague, and chronic malaria. These varieties are quite often reported as less amenable to treatment than formerly, more persistent, oftener fatal. The neuralgic complications are peculiarly obstinate, although rheumatic affections are about as intractable. The only consolation is that there is apparently a fading out of the type, and a slow but significant movement in the direction of an entire cessation of the disease.

There is no question in the causation of disease as yet unsolved of more practical importance than that relating to the agencies which cause malaria, although the theory of its production by minute organisms — bacteteria of one or more varieties — is exceedingly plausible, and very probably true. Still it is not yet proven, and so we are as yet uncertain whether the first cause is of a chemical nature, a liquid or gaseous poison, the result of putrefactive decay, with a certain degree of moisture and temperature, or minute microscopical living germs. The cessation of the systematic study of this subject by all the aids modern science affords, just inaugurated by the National Board of Health, in connection with our own State Board of Health and those of New York and Massachusetts, rendered necessary by the recent action of Congress restricting the work of the Board to yellow fever, small-pox, and cholera, is very unfortunate, to say the least. The need of a central power to collate and compare the different results of individual work, sift out the crudities, and complete the work by the accumulated results from each field, is very evident. Such work cannot be done by coördinate powers, there must be a head.

◆

DR. KINLOCH ON A SUPPOSED DEATH BY CHLOROFORM.

Dr. Kinloch, of Charleston, S. C., had, not long since, the misfortune to lose a patient during chloroform narcosis. We append Dr. Kinloch's own account of the case. Our views, steadily and persistently advocated for many years, and reiterated in an editorial but a few weeks since, upon the relative merits and safety of ether and chloroform, are too well known to need repetition. We should say, however, in contradistinction to Dr. Kinloch, that the one great recommendation of chloroform is its less tendency to produce nausea, and that a person who uses chloroform when ether can be had should be prepared for the consequences.

> It is desirable that there should be recorded every death attributable to either of the anæsthetic agents in use, for it has hardly been settled that one of these agents should be universally employed because of its immunity from danger. In certain sections of our country and of Europe, chloroform is still the favorite article used, for its general adaptability and because in the largest experience it has proved safe as well as satisfactory. In other sections there is a strong prejudice against chloroform, and a belief that ether is entirely free from danger. I have, in an experience of over thirty years, never had occasion to distrust chloroform, and have never until now seen a death attributable to its administration. From very many experiments and observations, however, I have been led to believe that ether is less apt to be followed by nausea or by great depression of vital power. My rule of practice, then, in late years, has been to employ chloroform in surgical and obstetrical practice, except in operations necessarily protracted, or where nausea and vomiting would be prejudicial to the condition of the patient. I am inclined to doubt if the death, in the case which follows, can be attributed solely to chloroform. Fright, terrible anxiety, a peculiar nervous organization, and an exalted moral sensibility, may have had much to do with the sad termination. But I prefer reporting the case and leaving it to the verdict of the profession.
>
> June 19th was appointed for the operation. Mrs. R. had always been exceedingly sensitive as to the matter of personal exposure, and I readily consented to give the chloroform only in the presence of female attendants. When the request was made for the patient to get upon the table, she became much excited, and could scarcely be comforted and assured. She shrank back as one having a feeling of impending danger. I subsequently learned that she had had a presentiment of death, and went so far as to write out requests she wished fulfilled after death. I mention these facts to illustrate the nervous condition of the subject, as with many it may be considered as having something to do with her sad end. The chloroform was given upon a towel folded funnel-fashion. The towel was at first held a little distance from the face, until the patient grew accustomed to the vapor and was habituated to the proper inhalation. The usual period of excitement came on, with some struggling of the arms and rolling of the body. One of the female attendants helped to control these movements, and in a short time re-

laxation began to be evident, with the slightest stertor of breathing. Less than three drachms of chloroform had been used. I at once suspended the chloroform, passed the towel over to the nurse, who was at the bedside, and a little removed, and asked her to hold it where she was. I felt no apprehension about the patient, and moved to the door separating the chamber from the parlor, and called to Drs. Simons and Pelzer, my assistants, to enter. I now took my position at the foot of the table, while my assistants remained at the side, and began to put the patient into the semi-prone and lateral position for operation. I little thought that during the few seconds of absence the cumulative effects of the drug would be exhibited. Glancing at the face of the patient, I suddenly discovered that it was cyanosed, and the eyes staring and fixed. I called to Dr. Simons to notice if the breathing was right, and almost simultaneously we both advanced to the patient's head. I saw that the respiration was embarrassed, and heard a gurgling noise coming from the presence of mucous secretions in the bronchi. Dr. Simons raised the head of the patient, and turned the body partly over into the supine position. I threw up the windows, dashed cold water upon the face and chest, slapped the surface smartly, depressed the head, while the body and lower extremities were raised, injected brandy, and subsequently liquor ammonia and brandy, subcutaneously. Towels were wrung out of very hot water and applied over cardiac region. Used galvanic battery as soon as this could be secured. Finally, noticing that the respiratory movements were now entirely arrested, also the action of the heart, while the veins of the neck were greatly distended, I opened, first, a vein at the bend of the arm, and afterwards the right external jugular, hoping that, by removing some of the dark blood from the cavities of the heart, this organ would have a better chance for contracting. All to no purpose, — the heart remained paralyzed, and we had soon to realize the fearful fact that death had supervened.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 5, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York	1,206,590	934	508	45.80	4.50	38.63	2.25	.75
Philadelphia	846,984	540	290	6.48	1.48	—	1.85	2.78
Brooklyn	566,689	377	239	57.51	5.83	47.97	3.45	—
Chicago	503,304	373	276	49.65	2.94	40.47	2.68	2.04
Boston	362,535	263	128	32.76	4.10	27.57	1.64	1.64
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	170	83	37.63	1.76	21.76	6.47	1.76
Cincinnati	255,708	142	80	42.94	7.04	20.42	2.11	1.41
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	71	28	39.42	7.04	14.08	1.41	5.63
Pittsburgh	156,381	97	66	46.38	4.12	27.83	5.15	4.12
Buffalo	155,137	115	81	57.35	3.48	43.45	3.48	—
Milwaukee	115,578	62	43	32.24	1.61	27,40	3.22	—
Providence	104,857	51	28	56.84	—	52.92	—	—
New Haven	62,882	—	—	—	—	—	—	—
Charleston	49,999	35	17	28.57	2.86	8.57	5.71	8.57
Nashville	43,461	23	11	51.08	—	17.36	8.68	4.34
Lowell	59,485	39	26	58.88	—	53.76	—	—
Worcester	58,295	36	20	66.48	2.77	60.94	—	—
Cambridge	52,740	24	10	41.58	—	37.42	4.16	—
Fall River	49,006	49	35	59.16	—	59.16	—	—
Lawrence	39,178	38	—	60.49	—	52.60	2.63	—
Lynn	38,284	6	4	50.00	—	33.33	—	—
Springfield	33,340	12	6	50.00	—	33.33	—	—
Salem	27,598	22	14	—	—	—	—	—
New Bedford	26,875	13	8	69.21	7.69	61.52	—	—
Somerville	24,985	—	—	—	—	—	—	—
Holyoke	21,851	15	8	53.25	—	46.66	—	6.66
Chelsea	21,785	14	7	42.84	—	14.28	14.28	—
Taunton	21,213	8	2	—	—	—	—	—
Gloucester	19,329	9	4	—	—	—	—	—
Haverhill	18,475	7	5	42.84	—	42.84	—	—
Newton	16,995	6	2	33.33	—	—	33.33	—
Brockton	13,608	3	1	66.66	—	—	66.66	—
Newburyport	13,537	6	3	33.33	—	33.33	—	—
Fitchburg	12,405	3	0	33.33	66.66	33.33	—	—
Malden	12,017	4	1	25.00	—	25.00	—	—
Twenty-one Massachusetts towns	161,793	80	42	43.75	3.75	35.00	6.25	1.25

Deaths reported 3587 (no reports from St. Louis and New Orleans): 2036 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1510, consumption 299, lung diseases 136, diarrhœal diseases 1168, diphtheria and croup 106, typhoid fever 51, scarlet fever 50, whooping-cough 33, measles 28, malarial fever 24, small-pox 23, cerebro-spinal meningitis 16, puerperal fever eight, erysipelas two, typhus fever one. From *scarlet fever*, New York 12, Cincinnati 10, Buffalo seven, Philadelphia and Baltimore five each, Brooklyn three, Chicago and Pittsburgh two each, Boston, Worcester, Chelsea, and Waltham one each. From *whooping-cough*, New York nine, Chicago four, Brooklyn six, Philadelphia and Cincinnati three each, Boston, Providence, and Charleston two each, Pittsburgh, Buffalo, and Nashville each one. From *measles*, New York six, Baltimore, Pittsburgh, and Buffalo four each, Brooklyn and Chicago three each, Lawrence two, Boston and Cincinnati one each. From *malarial fever*, New York nine, Chicago five, Brooklyn four, District of Columbia three, Nashville two, Baltimore one. From *small-pox*, Cincinnati 13, Chicago three, Philadelphia, Baltimore, and Nashville two each, Pittsburgh one. From *cerebro-spinal meningitis*, Brooklyn five, Chicago three, Springfield two, New York, Boston, Baltimore, Pittsburgh Milwaukee, and New Bedford, one each. From *puerperal fever*, Brooklyn and Lowell two each, New York, Boston, Lynn, and Chelsea one each. From *erysipelas*, Boston and Worcester one each. From *typhus fever*, New York one.

Forty-four cases of small-pox were reported in Cincinnati, Baltimore 31, Pittsburgh and Nashville each one; diphtheria 16, scarlet fever 13, typhoid fever 10, in Boston; diphtheria five, and scarlet fever four, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,041,166 (population of the State 1,783,086), the total death-rate for the week was 30.73, against 32.02 and 21 for the previous two weeks.

For the week ending July 15th, in 173 German cities and towns, with an estimated population of 8,495,842, the death-rate was 27.1. Deaths reported 4434: under five 2588; pulmonary consumption 487, diarrhœal diseases 367, acute diseases of the respiratory organs 338, diphtheria and croup 150, scarlet fever 87, whooping-cough 65, measles and rötheln 47, typhoid fever 44, puerperal fever 16, small-pox (Breslau, Beuthen, Cologne, and Koblenz each one) five, typhus fever (Königsberg, Danzig, and Posen each one) three The death-rates ranged from 14.7 in Wurzburg to 38.7 in Posen; Königsberg 34.7; Breslau 37.6; Munich 24.5; Dresden 28.2; Berlin 36; Leipzig 20.1; Hamburg 24.7; Cologne 28; Frankfort a. M. 21.2; Strasburg 27.3.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending July 15th, the death-rate was 19. Deaths reported 3090: acute diseases of the respiratory organs (London) 157, diarrhœa 282, whooping-cough 102, measles 66, scarlet fever 57, fever 34, diphtheria 20, small-pox (London four) nine. The death-rates ranged from 8.1 in Derby to 30.4 in Preston; Birmingham 16.1; London 17.7; Birkenhead 18.1; Newcastle-on-Tyne 21.2; Manchester 22.2; Liverpool 22.7; Leeds 23.1; Sunderland 25. In Edinburgh 21.3; Glasgow 22.3; Dublin 21.9.

For the week ending July 15th, in the Swiss towns, population 494,390, there were 25 deaths from consumption, diarrhœal diseases 15, acute diseases of the respiratory organs eight, typhoid fever five, scarlet fever four, diphtheria and croup two, whooping-cough and erysipelas each one. The death-rates were, at Geneva 7.2; Zurich 8.1; Basle 14.7; Berne 19.6.

The meteorological record for the week ending August 5th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July–August, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	8.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 30	30.128	67	76	64	61	66	68	65	NW	E	SW	6	8	1	C	C	O	—	—
Mon., 31	30.312	67	75	64	66	76	78	73	SE	E	SW	1	11	5	F	C	F	—	—
Tues., 1	30.258	70	82	61	84	49	68	67	SW	S	SW	4	10	12	F	O	O	—	—
Wed., 2	30.086	73	89	62	78	34	66	59	W	W	W	10	7	8	O	O	C	—	—
Thurs., 3	30.010	71	87	63	70	52	84	69	W	SE	Calm	5	4	0	F	C	C	—	—
Fri., 4	30.071	74	84	65	71	41	62	58	Calm	E	SW	0	9	3	F	F	C	—	—
Sat., 5	30.105	75	88	66	73	55	80	69	SW	SW	SW	4	3	12	F	O	C	—	—
Means, the week.	30.139	71	89	61				66										00	00

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

DR. FRANCIS ATWOOD.

St. Paul, *August* 10, 1882.

To the Editor of the Medical and Surgical Journal.

Dr. Francis Atwood died in this city, the 5th inst., of typho-malarial fever, at the age of thirty-six. He had practiced here eight years, and at the time of his death was unquestionably the leading oculist of the Northwest.

Dr. Atwood was a graduate of Harvard College and of the Harvard Medical School, and studied his specialty with Williams and Von Graefe.

The following resolutions have been adopted by the Ramsey County Medical Society: —

Whereas, In the providence of God our friend and associate, Francis Atwood, has been called away from us in the height of his usefulness.

Resolved, That as a Society we hereby place on record our deep sense of the rare combination of qualities which endeared Dr. Atwood to us as a man and commanded our confidence in him as a physician.

Resolved, That, fully sensible of the loss that both our profession and the public have sustained in the death of Dr. Atwood, we deplore the event which has removed from us one so worthy in every way of the respect and esteem which he always inspired.

Resolved, That we tender to the wife and family of our friend our heartfelt sympathy in their great sorrow, and commend them for consolation to Him who is the only source of all true comfort.

Resolved, That a copy of these resolutions be sent to the family of Dr. Atwood, and that they be entered upon the minutes of this Society, and be furnished for publication to the daily press of this city, to the *Boston Medical and Surgical Journal*, and to the New York *Medical Record*.

D. W. Hand, *President*.

C. B. Witherle, *Secretary*.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 5, 1882, TO AUGUST 11, 1882.

PROMOTIONS.

Colonel Charles H. Crane, assistant surgeon-general, promoted surgeon-general, with the rank of brigadier-general, to date from July 3, 1882, *vice* Barnes, retired.

Lieutenant-colonel Charles C. Keeney, surgeon, promoted colonel, to date from June 30, 1882.

Lieutenant-colonel John F. Head, surgeon, promoted colonel, to date from June 30, 1882.

Major Joseph B. Brown, surgeon, promoted lieutenant-colonel, to date from June 30, 1882.

Major David L. Magruder, surgeon, promoted lieutenant-colonel, to date from June 30, 1882.

Major Charles Page, surgeon, promoted lieutenant-colonel, to date from June 30, 1882.

Captain John Brooke, assistant surgeon, promoted surgeon, with the rank of major, to date from March 2, 1882.

Captain William H. Gardner, assistant surgeon, promoted surgeon, with the rank of major, to date from June 23, 1882.

Captain Charles Smart, assistant surgeon, promoted surgeon, with the rank of major, to date from June 30, 1882.

Captain William S. Tremaine, assistant surgeon, promoted surgeon, with the rank of major, to date from June 30, 1882.

Captain Morse K. Taylor, assistant surgeon, promoted surgeon, with the rank of major, to date from June 30, 1882.

Books and Pamphlets Received. — Proceedings of the Connecticut Medical Society, 1882. Ninety-First Annual Convention. New Series, Vol. II., No. 3. Hartford, Conn.

Combined Intra-Uterine and Extra-Uterine Twin Pregnancy, with an Analysis of Twenty-Four Cases, etc. By B. B. Browne, M. D., Baltimore, Md. (Reprint.)

Lectures.

ADDRESS IN SURGERY BEFORE THE BRITISH MEDICAL ASSOCIATION AT WORCESTER, AUGUST 10, 1882.[1]

BY WILLIAM STOKES, M. D., F. R. C. S. I.,
Professor of Surgery in the Royal College of Surgeons, Ireland.

After an introduction which contained very interesting remarks upon preliminary and early medical education, and a brief mention of the numerous late advances in surgery, Mr. Stokes continued: —

Memorable as these advances would make any era in the history of surgery, they all pale before three I have yet to mention — advances which the surgical historian will doubtless point to and emphasize as the three giant strides that the past half century has witnessed. I allude first to the discovery of the means of banishing pain during the performance of surgical operations; secondly, to the restoration of diseased or injured bones and joints necessitating resection; and, thirdly, the enunciation of the principle and establishment of the practice by Pasteur and Lister of antisepticism in the treatment of wounds. When we reflect that so large a part of these changes in surgical principles and practice has been due to the genius and honest labor of so many workers in the United Kingdom, we may feel a pardonable pride in British surgery, and confidence in the coming triumphs of our art.

To anæsthetics, antiseptics, and osteogenesis, together with a few cognate topics, I would therefore now invite attention.

Whatever anæsthetic the surgeon selects — whether it be chloroform, ether, or both combined, bichloride of methyline, or nitrous oxide gas — we must admit that even with the most careful precautions as regards the condition of the patient generally, the anæsthetic selected, the amount of it used, and the mode of its administration, the gauntlet of peril is still to be run. In truth, it is hardly to be expected that an agent which can so rapidly and completely paralyze our senses should not be attended with peril. Of the two anæsthetics that surgeons as a rule mainly rely on — ether and chloroform — much has of late been done to diminish risk by limitation of the amount of the anæsthetic used; by the gradual introduction of it into the system; by the avoidance of ether in infancy and extreme age; in the puerperal state; in hysteria, and also when there is reason to suspect the existence of any acute or chronic form of renal or pulmonary disease.

In the use of chloroform the ever-present risk of cardiac paralysis appears to be increased when any functional or organic disease of the heart is present, and it is, therefore, in such cases distinctly contra-indicated.

Although the number of accidents connected with the use of anæsthetics is fortunately very limited, still I feel sure that by more accurate knowledge of the facts I have mentioned, by intrusting the duty of administering anæsthetics solely to persons of experience and judgment, and by a stricter adoption of the rule so happily formulated by Mr. Jonathan Hutchinson in reference to the desirability of using chloroform in cases below six and above sixty years of age, the number of these regrettable accidents would be still further largely diminished. In the majority of cases, however, I would unhesitatingly prefer ether. In using it there is greater economy of time; it is, with the necessary precautions taken, safer; there is, as a rule, less sickness, and return to sensibility is slower. To obtain these advantages — which, with others, have been so well and systematically formulated by Mr. Teale,[2] regard must be largely had to the method employed of administering it; and I am of opinion that one in which the air is rebreathed by the patient, as in the inhalers of Morgan, Ormsby, and Clover, should be preferred, as so great an economy is effected thereby, not alone of ether, but of what is of far greater importance, of heat in the air-passages, the inspiration of a large quantity of cold ether vapor tending to induce respiratory syncope.

In these instruments the inhalation of a combination of ether vapor and carbonic acid gas occurs. It does not, however, appear to be clearly ascertained whether in this fact there is the introduction of an additional element of danger or not. Opinion on this point is still greatly divided. One would say, *à priori*, that there was, but experience has not established the fact.

Of the countless benefits conferred on man by anæsthetics, of the suffering prevented, of the absence of all anticipatory fear of suffering, of the happy subsequent oblivion of all the horrors and details of the operation, and of the diminution of shock, it is unnecessary to speak. To these must be added the advantages which enable the operator to act with a deliberation and calmness, enjoying freedom from anxiety and care. Advantages such as these cannot be overestimated, being as signal to the patient and the operator as they are to surgery.

Although there is traditional evidence that the anæsthetic properties of certain plants — notably the mandragora — were known to the physicians of ancient Greece and Rome, and that in 1800 our distinguished countryman, Sir Humphrey Davy, mentioned that nitrous oxide was "capable of destroying physical pain, and may be used with advantage during surgical operations," still it was not until 1846 that anæsthetics came properly within the domain of practical surgery, when Morton, in the Massachusetts General Hopistal, first demonstrated the possibility of inducing anæsthesia by the inhalation of ether.

To Simpson is undoubtedly due the credit of discovering, in 1848, the anæsthetic properties of chloroform, and in giving an impulse to its adoption, such as his brilliant intellect alone could give; but still we must cordially, willingly, and gratefully indorse the opinion of Professor Gross, that "If America had contributed nothing more to the stock of human happiness than anæsthetics, the world would owe her an everlasting debt of gratitude."

Considering that the treatment of wounds is, in Professor Humphry's words, not merely "the first stone but also the corner-stone of surgery," antiseptic practice should rank, in my opinion, as the greatest of the surgical advances that the past half century has witnessed. It deserves a special attention, not merely on account of the results of its adoption, but also because surgical opinion is still so divided about it, an unsettlement to which an impulse has been given by Mr. Savory's remarkable address at Cork, and by the observations on the value of carbolic spray made by Mr. Lister himself at the International Medical Congress last year. As regards Mr. Savory's denunciation of Listerism, I would say that after reading it, and also the able reply to it by my colleague, Dr. Thomson, one cannot but come to the conclusion that when the address is stripped of all its brilliant eloquence and rhetorical decoration, two facts are to our surprise brought clearly to light. One is the admission of the germ theory of putrefaction, and the other that the method of dressing employed by Mr. Savory is essentially antiseptic, consisting as it does of many of the features that characterize Listerian dressings. For example, carbolized catgut ligatures, carbolized oil, drainage, and washing the wound with a weak permanganate of potash lotion, or "some other potent antiseptic." Now, as the author of the reply to which I have referred properly asks, "Is this method fittingly characterized by its simplicity and the entire absence of all novelty?"

---

[1] From advance sheets.

[2] British Medical Journal, March 11, 1882.

In reference to Mr. Lister's statement on the value of carbolic spray, about which there has been so much unfortunate misconstruction and misunderstanding, I would certainly say he did not surrender his position in any way. He did not, as was said to me, in terms more picturesque than accurate, by an eminent surgical friend on that occasion, "inter antiseptic surgery and then sing a dirge over it." On the contrary, he stated that he looked forward to obtaining a more perfect and convenient mode of asepticism than that afforded by carbolic spray.

Considering the subject from a purely practical point of view, it appears of little consequence whether we accept the views recently discussed by Dr. Burdon Sanderson or those of Ogston and Hueter, the former maintaining that the inflammatory exudates of a wound do not depend primarily on the contact with them of atmospheric organisms, but that their secondarily infective character does; in other words, that atmospheric organisms *per se* are not necessarily a source of danger, nor do they predispose to the formation of inflammatory exudates, but that they do exercise a baneful influence on the latter by rendering them infective. To quote his words, "they are not so much mischief-makers as mischief-spreaders." Two distinct functions are attributed by Burdon Sanderson to these organisms; one "of developing what may be called the phlogogenic infection, and that of conveying it to all parts of the body." Ogston and Hueter, on the other hand, maintain, and furnish strong arguments for their views, that septic organisms are primarily the sources of all the inflammatory and other troubles to which wounds are liable, and that under aseptic conditions these dangers can be avoided. It is not my purpose to discuss which of these theories is likely to be correct; for whichever view we adopt, the necessity for thorough antiseptic precautions remains the same. Assuming that Burdon Sanderson's theory be correct, and that inflammatory exudation is the physiological and harmless outcome of a traumatism, can we say how long it will remain so? How long or how short a time it may take to become infective, whether days, hours, minutes, or seconds? Is it not in accordance with all reasonable probability that the time must be ever-varying; and assured of this, should we not take every precaution to prevent the entrance, neutralize or destroy the *noxa* or septic agency? Have we any means of estimating the power of resistance to the action of septic agencies, or of telling when will commence those chemical putrefactive changes, the sources of the disasters of surgery which antiseptics so powerfully strike at, prevent, and destroy.

The essentially weak point in the persistent and obstinate opposition to Listerism is the almost universal admission of the truth of the germ theory of putrefaction. If the fantastic theory of heterogenesis had not long since been swept into the deserved limbo of other exploded doctrines, there would be some scientific stand-point for those opposed to Lister's theory and practice. But not having this, and admitting the truth of the germ theory of putrefaction, they surrender their position. An attempt has been made by Mr. Lawson Tait to draw a distinction between the effects of germs on dead and living tissues, the only serious consequences being, it is alleged, those which result from their introduction into the system through the medium of dead tissue. Such is the contention. In a word, it comes simply to this, that if the dead tissue factor were non-existent the organisms would remain harmless; if, on the other hand, it be present they become hurtful. But those who hold this view ignore the elementary fact that there never was a wound, and especially one in which vessels are tied or twisted, in which dead and living tissues were not at once brought into contact. Assuming, however, that this was not the case, has it not been shown on clear evidence by Dr. Burdon Sanderson that septic agencies generated in the organism may induce idiopathic inflammation without the medium of dead tissue? Also that in acute peritonitis septic organisms can, through the medium of the lymphatic vessels, be conveyed into the blood streams, and, to use his words, "carry with them a phlogogenic virus, by virtue of which, wherever they lodge, they become the starting-points of infective abscesses." Again, that similar phenomena are observed in connection with ulcerative endocarditis, confirming the observations of Weigert, that in variola they find their way "in myriads" into the circulation, and eventually find a resting-place in the capillaries of the internal organs, where they become nuclei of infective abscesses?[1]

If such phenomena are capable of being produced in the organism without the intervention of dead tissue, which appears to stimulate septic agencies to such pernicious activity, there is certainly all the more reason for using means to neutralize or destroy them, when, as in all wounds, dead and living tissues are brought into contact.

Those who advocate and practice what they term a "modified" antiseptic system, attempt, in fact, in a roundabout, clumsy, inefficient way, to do precisely what those who practice Listerism achieve by means which are the outcome of accurate scientific research.

The aim in both cases is to neutralize or destroy the agencies which predispose to and produce the *materies septica;* in the one instance by numerous uncertain and often inefficient methods, and in the other by the unerring artillery of chemical agency.

Among many depreciatory remarks that have been made in reference to Listerism is one based on its alleged want of originality. It has been stated that both antiseptic principles and practice were understood, recognized, and appreciated by many of Mr. Lister's predecessors and contemporaries. Foremost among the latter M. Maisonneuve has been mentioned. Having attended the clinique of that eminent surgeon for two sessions in 1864–65, I am in a position to mention the nature of the wound dressings then employed by him. With a large syringe a quantity of a weak solution of "*acide phenique*" was applied to the wound, then a piece of linen or cloth, perforated with numerous openings, and covered with a yellow-colored grease, was placed on the wound, secured by a dry compress and bandage. Such were the antiseptic dressings of which Lister's, it is alleged, are only a somewhat complicated, expensive, and, in many cases, dangerous reproduction!

---

[1] British Medical Journal, April 15, 1882.

It has been stated that ovariotomy should be considered the touchstone of the efficacy of the antiseptic treatment of wounds. I do not think so (although my successes in ovariotomy date from the time I adopted the system), and for the reasons given by Professor Lister. First, the disposition of a large serous membrane to absorb rapidly the plasma from the cut surface, the absence of tension, the high vital power of the peritonæum in uniting after being wounded, and, lastly, that bloody serum is an unfavorable medium for the growth of micro-organisms, a fact directly at variance with the dictum of Keith, that it is the "enemy of the ovariotomist." One of the best tests, if not the best, for the value of antiseptic practice is resection of the knee-joint, as there are so many circumstances that militate against immediate union being obtained after it. In the first place, the cases requiring so formidable an operation are, as a rule, in a condition of great physical exhaustion consequent on long confinement, and probably protracted suffering of mind and body. The wound is of necessity a large one; the operation occupies a considerable time; two large freshly-cut bone surfaces are made, between which union is to take place; and, lastly, there is the great difficulty of keeping, no matter what appliance be adopted, the limb absolutely at rest during the process of union. Before the adoption of Listerism the surgeon anticipated that four, six, or eight months, or longer, would elapse before union took place, and it was always a subject discussed at consultations on these cases, previously to operation, whether the patient would have strength to endure so protracted a suppuration. As an illustration of how changed matters are now, in a series of fourteen of my cases of excision of the knee-joint, the wounds in nine of them united without a trace of pus production, and in the last of them only two dressings were required subsequent to the one applied at the time of the operation, and in seven weeks after the patient was up and going about. Another antiseptic triumph was the case of a boy with extensive necrosis of the fibula, sinuses, and suppuration existing at the time of the operation. I excised subperiosteally the diaphysis of the fibula, and the case pursued a perfectly aseptic course, the evidence of new bone formation being also incontrovertible. From the fact of there being no pus production subsequent to the operation, notwithstanding the preëxistence of suppurating sinuses, a special interest attaches itself to this case. I can only account for this exceptional circumstance as a result of the careful washing of the sinuses by carbolic acid and zinc chloride solutions. A still more remarkable case was that of a youth who was under my care last November. He trod on a triangular piece of glass, which, having passed deeply into the sole of his foot, was with difficulty extracted. An acute suppurative inflammation, involving the ankle-joint and extending as far as the knee, was the outcome of the injury. There was indicated by both pulse and temperature very high fever, and the condition of the patient was most critical. I made free incisions under the spray on both sides of the ankle-joint, and gave exit to pus and synovia in large quantity. Into these openings I injected a weak solution of eucalyptol, and inserted Neuber's drainage tubes. Next day I found pulse and temperature normal, and from this the case pursued an aseptic course, and in less than a month after the patient left the hospital, the foot being in a perfectly normal condition, all motions of its joints being free and unattended with the slightest stiffness or pain. In another case I cut down on an anchylosed hip (the limb being so flexed as to be perfectly useless to the patient), and divided the neck of the femur with an osteotome, and straightened the limb. The wound healed without pus production, and a freely movable false joint was formed, and the patient is able to walk several miles without inconvenience.

Another antiseptic triumph was obtained in two cases of amputation at the hip-joint. In one of these there were preëxisting sinuses and profuse suppuration, and, notwithstanding, I succeeded for eight days, during the most critical period of the patient's convalescence, in keeping the wound aseptic, and preventing the occurrence of surgical fever. The result in the second case was more remarkable, not only during the healing of the wound was there no pus production but pulse and temperature hardly ever rose beyond the normal standard. The skin was unbroken, and on the evening previous to, and also on the morning of, the operation the patient had a eucalyptol bath. Looking at these few cases — few, not because I could not largely supplement them, but because they are sufficient for my present purpose — I would ask, could such results have been obtained previous to the Listerian teachings of the principles and practice of antiseptic surgery? There can be but one reply — impossible.

In giving the details of these antiseptic triumphs I may be considered dogmatic and egotistical. If so, I regret it, for nothing could be further from my desire; still less would I seem captious or actuated by any partisan spirit. I have mentioned them solely through a desire of having the truth recognized and established, and because personal experience is the soundest basis for honest conviction.

As regards the hygienic effects of the practice, I may mention some facts of interest noticed by me and my colleagues in the hospital to which I am attached. The building is a very old one, and was not constructed originally for a hospital. None of the more modern arrangements, now considered so essential, as regards heating, light, ventilation, etc., exist. It is situated in a poor, very densely populated part of the city, with tenement houses, dairy yards, cattle sheds, and stables in its neighborhood; and some of the houses in its immediate vicinity have been designated by the Medical Officers of Health as "fever nests." When I was a student there, erysipelas and pyæmia were not infrequently observed after operations even of no great magnitude; hospital gangrene too, I have seen several instances of — in fact, these three diseases constituted a grim trio, of which the surgeons had not unnaturally a dread. Let it not be thought that the occurrence of these was in any way to be attributed to want of care and attention to cleanliness. No cases could in this respect be more conscientiously or carefully managed. What now exists? Hospital gangrene is an extinct disease, nor have we observed during a period extending over six years a single case of erysipelas, septicæmia, or pyæmia following an operation in which the practice of Lister was accurately carried out; *accurately*, for everything depends on that. The practice has been well compared to a coat of mail which secures the wearer so long as it is perfect, but any missing link in which may admit the *lethalis arundo.*

Similar testimony to what I and my colleagues can state has been given by many foreign surgeons of eminence, among whom I may mention Von Nussbaum, Burdeleben, Thiersch, Von Langenbeck, Volkmann, Esmarch, Saxtorpf, Championniere, and many others.

Much blame has been cast on Professor Lister and his followers for not having had recourse more largely than they have done to statistics, to prove the superiority of antiseptic practice over the older and alleged simpler methods of wound dressing, and to show that by the use of the former we are more independent of those epidemic influences that have hitherto been so pregnant with disaster in operative surgery. It is not my purpose here to discuss the value of the surgical statistics that have been adduced to prove that the alleged simpler methods of wound dressing are of equal efficacy to those of Lister, especially as most of them have a strange family resemblance to the latter; but this I will say, that whatever value is to be ascribed to accumulated figures — often sadly fallacious — that value is not to my mind greater, or at all so great, as the often repeated occurrence of test cases, recorded daily, not alone in a particular hospital, town, or country, but in hospitals in all climates and conditions, where the hygienic surroundings are brought to the highest known degree of perfection, as well as where they are in a condition the most deplorable. Such records carry more weight with me than the inflated statistics from any particular hospital, or the alleged results obtained without antiseptics after any special operation or group of similar operations.

Mr. Savory dwelt at great length on the statistics of operations at St. Bartholomew's Hospital. These were, no doubt, very important, and probably carried conviction as to the soundness of the conclusions drawn from them to the minds of most of his hearers. In various points, however, they were unsatisfactory to me. For example, among others, no mention whatever was made of the operation of ovariotomy, in which procedure, although some regard Listerism positively injurious, still many others take an opposite view, and think with myself that it has probably done more than anything else to diminish the mortality of the operation. It was unfortunate, in my opinion, that the facts in respect of this particular operation at St. Bartholomew's Hospital, before and after the introduction of Listerian antiseptic practice, were not stated.

Although I do not regard surgical statistics with the reverential awe that some do, who look upon them, in fact, as a sort of tribunal beyond which there can be no appeal, I observe that in a record of upwards of six hundred operations performed by myself and my colleagues at the Richmond Surgical Hospital during the past three years, an institution which I have already spoken of as being hygienically in so unsatisfactory a condition, the mortality was 3.6 per cent. and there was not a single case in which Listerism was accurately employed that was followed by any infective disease.

The discovery of anæsthetics, and the means of inducing osteogenesis, have largely widened the field of practical surgery. When we consider the revolution that has taken place since the introduction of antiseptics in the treatment of compound fracture, of abscesses — especially those symptomatic of bone disease, — of bursal tumors, of congenital as well as acquired osseous deformity, of ununited fractures, including those of the patella and olecranon, of foreign bodies in joints, of hæmorrhage and aneurism by antiseptic ligature, and of various diseases and injuries of the abdominal organs indicating the operations already mentioned, this may, I think, be said with even greater truth. To these may also be added certain thoracic affections such as empyema, pericardial effusion, and pulmonary abscess, by which the wide gulf that so long existed between medicine and surgery has been to a great extent bridged over, uniting them together firmly, strongly, and forever.

It is a subject of regret to me that so many surgeons of long experience, and of great and deserved eminence, have been found who have either been disposed to discredit a thorough antiseptic practice altogether, or have given but a very lukewarm adherence to it. Much allowance, however, must be made for the well-known and not unnatural dislike to change on the part of those, many perhaps advanced in life, whose early training has been so different to that now available. With their successors, more fortunately circumstanced in this respect, the case is different. Their condemnation has, I fear, been the result of apathy, and, in some instances, indolence, preventing them taking the trouble to learn either the principles or the details of the practice.

Representatives of what may be termed a Rip Van Winkle school of surgery, they differ in one respect from the mythical personage just alluded to. His ignorance of what was going on about him was the result of involuntary unconsciousness. But his surgical analogues, I fear, willfully refuse to see, willfully refuse to acknowledge, and willfully refuse to recognize what has been and is being done. Strangely unmindful of the fact that honest scientific toil has never yet proved other than fruitful of good, they promulgate views acceptable to ignorance and indolence, and make the land ring with the false and cruel tale that the value of Listerism is a delusion, a bubble, a shadow, and a myth, at once expensive, complicated, and poisonous. If, on this latter account, it is to be rejected, then may we, with equal justice, say, "Away with anæsthetics, away with opium, mercury, belladonna, with more than half the means at our disposal for alleviating human suffering and prolonging life."

In the interests and for the credit of British surgery it is time so unrighteous a warfare should cease. It is time that the irritating dust of an unreasoning prejudice should be swept away. It is time that one of the greatest discoveries and boons to surgery this century has produced should be universally recognized. It is time that its discoverer and exponent should be acknowledged as one of whom it may well be said: —

> "With Genius Nature joins in everlasting covenant still,
> The promises of one, the other fails not to fulfill."

The methods adopted for bringing about a regeneration of bones and joints necessitating resection on account of injury or disease constitute an advance in surgery of such interest and practical importance as to distinctly merit special consideration. To adopt a measure by which the main support of a limb, when diseased, and not only rendering that limb useless, but also perhaps imperilling life by pain and exhaustive suppuration, can be removed, with not a mere probability, but, in many instances, almost a certain confidence that it will be restored to the patient, is a triumph than which it is hard to conceive one of greater importance among the developments of modern surgery. The subject has been of keen interest to me for many years, since the time, when, in 1865, I witnessed in Lyons many of M. Ollier's experiments and subsequently repeated them. Strongly impressed by what I then learned, I have since in practice, as suitable cases presented themselves, adopted periosteal preservation in various operations on bones and joints, a procedure with which the names of the eminent surgical trio, Syme, Langenbeck, and Ollier, must forever be associated. The operative measures on which my experience is based are resections of the elbow, shoulder, and ankle-joints; resection of the diaphysis of the fibula in its entirety; resection of the greater portion of the ulna; of metatarsal and metacarpal bones; and, lastly, of transplantation of periosteum, as a part of the so-called Indian rhinoplastic operation. Still, though the good results obtained by this practice are, in properly selected cases, not open to question, there can be no doubt as to the existing unsettled condition of surgical opinion in reference to the value of the procedure. This, I believe, arises from a twofold cause: one being traumatic, from insufficient care being taken during the detachment of the membrane, and the second, the non-differentiation by surgeons of the cases likely to be benefited, and those in which the adoption of the practice is, as a rule, attended with disappointing results. As to its value, when the membrane is comparatively healthy, and the patient young, there can be no question. The activity of bone production and other signally gratifying results of the practice must be acknowledged when performed under these circumstances. These results, however, are not so striking when the patient is an adult. In some cases no bone production whatever is observed, and in others the osteogenetic process is slow, the product weak and liable to become absorbed. It should also be borne in mind that in early life the membrane has a dual function, one, that of increasing the thickness of bone, and the other the repair of waste. In adult life it is mainly confined to the latter. This rule, however, is not without exception. One instance I can recall of a man aged forty-two on whom I performed a resection of the upper end of the humerus on account of carious disease. The result was eminently satisfactory; not only was there a reformation of the bone removed, as evidenced by comparative measurement, but also a pseud-arthrosis so perfect as to enable him now, as I have recently learned, to use his spade, to plow, and perform with efficiency all the ordinary duties of an agricultural laborer.

Another point worthy of consideration is the value of the practice in adults and children when the membrane is found to be thickened and pulpy. Among the former, as mentioned by M'Ewen, the osteogenic layer is, as a rule, found to be destroyed, the outer layer thickened, vascular, and lined with granulation tissue which soon undergoes fatty degeneration. From such a condition no bone production could possibly be anticipated. On the other hand, a thickened, vascular, cell infiltrated, softened condition is not incompatible with its osteogenic layer being intact, and its activity in bone production unimpaired. In truth not unimpaired but exalted, as we observe in acute necrosis, and also in the development of syphilitic nodes. The condition of fatty degeneration of the osteogenic layer is found among both adults and children, but more frequently among the former. When found among the latter the cases are, as a rule, badly nourished, anæmic, weakly, and scrofulous. The thickened vascular but intact condition of the membrane is what is observed among young persons, and its preservation, therefore, is obviously indicated. In adults it is rarely observed.

The efforts to produce bone in experiments on the lower animals by periosteal transplantation have not been attended with any very marked success, nor have similar attempts in man been specially encouraging. In only one instance did Ollier obtain distinct evidence of bone formation from grafted periosteum. In the Indian rhinoplastic operation I have undoubtedly succeeded after transplanting the membrane from the frontal bone in satisfying myself of the existence of bone reproduction. When left attached to bone, as in Von Langenbeck's modification of this operation, the result has not been so good, owing to the liability to necrosis of the transplanted or detached portions of bone.

As regards bone transplantation I cannot speak from any personal experience; but, in connection with this all-important subject, I must allude to the great stride made in this direction by Dr. M'Ewen, of Glasgow. The case of inter-human osseous transplantation in which over two thirds of the shaft of a humerus was restored, and an account of which was communicated to the Royal Society last year, is one which must stand out in bold relief in the history of this new departure in operative surgery — one which is with many others an outcome, indirectly perhaps, but not the less a result, of antiseptic surgery. For the experience derived from observing the progress towards good union and without pus production of bad compound comminuted fractures when pieces of bone completely separated, and even detached from periosteum, have, after being antisepticized, been replaced, lived, and eventually united to the neighboring osseous structures, tends, as M'Ewen has pointed out, to show the probability of transplanted bone living. The practice of interhuman osseous transplantation is one which of necessity is applicable to only a very limited number of cases, and the means of carrying it out must rarely be available as fresh, human, healthy osseous transplants cannot often be obtained. The case, however, which I had an opportunity of examining, is so pregnant of interest, and so suggestive, that it must serve as an incentive to further effort to guide and encourage those working in this direction.

The subject of periosteal preservation naturally leads to that of joint resection, in which it has played so important a *rôle*. The resection, however, I wish more particularly to allude to, namely, that of the knee, is less associated with periosteal preservation than the other excisions. The surgical merits of this operation being so important and so vexed a question make it worthy of special notice. I will not, however, dwell at any length on the subject, having regard to the fact of its having been recently so ably handled by Mr. Holmes at the meeting of the Association at Cambridge.

It is not surprising that its position as one of the resources of surgery is not yet generally appreciated, and that controversy should still so hotly rage about it, when we reflect that the majority of surgeons have hitherto regarded it in the light of a substitute for amputation. In doing so a grave error has been committed, for the indications for one of these operations should never be those for the other. If we accept the view that tuberculosis, more particularly as regards its articular manifestations, is primarily local, but, as shown by Klebs, like cancer or syphilis, transmissible and capable of producing a general infection, a view that mainly from a clinical stand-point I accept, then the question of the importance of early resection at once comes to the front. But it may and has been said, notably by Mr. Macnamara, of London, that in the early stages of strumous articular disease, affecting mainly the synovial membrane, that rest, good diet, and convalescent "homes" will suffice to cure the disease at this period of its development. I admit they may, but in a very small proportion of cases. I would be equally ready to admit that in a small proportion of cases intermittent fever may get well without quinine, syphilis without mercury, iritis without belladonna, and primary union without antiseptics. Who, however, would maintain that because in a small minority of cases the desired results are obtained without such aids, that therefore it was open to discussion whether they should not be abandoned altogether? In dealing with a broad question, such as the surgical merits of knee resection, the question as to a treatment that is only applicable to a small, fortunately-circumstanced minority, and the advantages of which are very problematical, should scarcely be mentioned when a practice is under discussion applicable to the masses of mankind in all countries, climates, and conditions, without convalescent homes at their disposal or ways of getting constant skilled aid in carrying out an "expectant" treatment for two or three years, — a treatment from which no better result than anchylosis can be expected. In patients, too, with a predisposition to secondary tuberculous deposits, the probability of the recurrence of the disease after "expectant" treatment must be borne in mind.

From my experience I believe that excision of the knee should not be looked on as a last resource, but hat the operation should be performed before any profound organic changes take place, when also the following conditions are fulfilled: An unbroken skin, an all-important factor; the disease limited, and to the soft structures an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may in the great majority of cases confidently be anticipated. The alleged unfavorable results of the operation, especially in early life, are distinctly opposed to my clinical experience.

In another group of operations — namely, in amputations, the preservation of periosteum is, according to Von Langenbeck, Trélat, and others, attended with advantage. The formation of a periosteal curtain to cover the cut surface of the bone and its medullary canal is believed to act as a shield or barrier against septic agencies, and diminish the chance of the occurrence of some of the secondary calamities, notably osteomyelitis, following amputations. The method I have in some instances adopted, and with success, is, making a somewhat quadrilateral-shaped flap at the membrane and letting it fall over the cut surface of the bone. Another method, that of M. Trélat, is to detach the membrane all round the bone for fully an inch below the point where the bone had to be divided, making, in fact, a sleeve-shaped flap. This plan must, however, materially protract the operation.

This leads me to consider some other comparatively recent improvements in the operation of amputation, and to bear my testimony to the great advantage to be derived from the adoption of the principle of long anterior flaps, the chief credit for establishing which belongs to the late Mr. Teale, of Leeds, and it is a source of pleasure to me that the advantages from his method of amputation were so soon, and continue to be so fully, recognized and appreciated in Dublin. In reference more particularly to thigh amputation, I cannot refrain from noticing the procedure in which the principle of the long anterior flap is embodied — namely, the "single flap" or "single-skin flap" operation of the late Mr. Carden of this city. In introducing this operation he won for himself a lasting repute for originality, ingenuity, and skill, and I am sure that in expressing a deep regret at the absence from among us this day of so accomplished and able a surgeon, so wise in council and full of resource, in whom, in truth, were to be found all the qualities of a great surgeon, I only feebly, perhaps, give utterance to the thoughts of all those who knew him, appreciated him, and had the privilege of his friendship.

Gritti's operation undoubtedly owes its parentage to that of Carden; but, although the retaining of the patella and consequent preservation of the normal attachments of the extensors of the leg is a plan as good as it was original with Gritti, still the details of this method prevented the realization of those advantages which in principle it embodied. Hence the modification which I have ventured to term "supracondyloid amputation," an operation which, retaining the advantages of Gritti's method, eliminates its defects by lengthening the anterior flap, forming a posterior flap one third in length of the anterior one, suturing the patella and femur together, and lastly, and most important of all, by making a high femoral section, but one not involving the medullary canal.

The special advantages that may be claimed for supracondyloid amputation are: —

(1.) That the posterior surface of the anterior flap being covered with a natural synovial membrane the chances of suppuration and purulent absorption are diminished.

(2.) Any possibility of the split patella shifting from its place on the cut surface of the femur is prevented by the high femoral section, and by suturing the two bones together.

(3.) The vessels are divided at right angles to their continuity and not obliquely, as in other flap operations.

(4.) The existence of a posterior flap diminishes the chances of any wide gaping of the wound, while the anterior flap being oval increases the chances of the stump tapering gradually towards its extremity and assuming the form of a rounded cone.

(5.) The preservation of the normal attachments of the extensors of the leg.

These advantages embody those of both flap and circular amputation of the thigh, and at the same time eliminate their defects.

Although there are many other surgical topics of interest and importance I should wish to discuss, did time permit, there is one bearing directly on surgical progress which, though it must be briefly alluded to, I wish particularly to mention. Recently all who have at heart the progress of scientific medicine and surgery must have rejoiced at the formation of the "Association for the Advancement of Medicine by Research." This step augurs well for the future of physiology — the science which is not alone the foundation, but also the frame-work of medicine, surgery, and pathology.

At the opening meeting of the Association, Sir George Jessel[1] well remarked that there are two things the public require to be instructed in — one, that the future progress of medicine must rest on science; and the other, the necessity for experiments on animals. The great practical difficulty, however — one which, I hope, in time will be overcome — is that the Association will have to deal with a section of the public who refuse to be instructed; refuse to recognize established facts; refuse to weigh evidence; substitute groundless assertion for argument, and willfully and deliberately accuse the scientific physiologist of a selfishness and cruelty as heartless as it is cowardly. In creating so unjust a prejudice there is in some instances, doubtless, an unconscious, but in many others, I fear, a willful perversion of the moral sense of the public. It will be no light task for the Association to instruct such persons, whose wrath is reserved — not for the sportsman, gourmet, or military tyrant, but for the physiologist, who is outlawed if he does not fulfill all the vexatious conditions of an extraordinary Act, the passing of which was simply an insult to our profession, whose aim is ever, not to cause suffering, but to relieve it — not to destroy life but to save it, and who are ever ready willingly to imperil, and often do, with true heroism, lay down their own lives to save one that is, perhaps, worthless to all but the possessor of it. If in this contention a heartless cruelty is found, on which side is it? Is it with those whose objects I have indicated, or with those who hinder and thwart the realization of them?

It has been stated with the inaccuracy that, as a rule, characterizes the utterances of the, in many instances, perhaps, well-meaning, but not the less essentially mischievous, section of the community, that takes so keen a pleasure in discrediting experimental physiology, that no practical benefit has accrued to medicine or surgery from it. I would, leaving what has been done in this direction in medicine to other and abler hands, suggest to their consideration a study of Mr. Gamgee's recently published and able work on The Influence of Vivisection on Human Surgery. In this it will be seen that many of the most important developments of surgery are the direct outcome of physiological experiment, as, for example, subcutaneous surgery, arterial ligation, torsion, transfusion, the introduction of the écraseur, periosteal preservation, artificial respiration, and, among others, such operations as nephrectomy, ovariotomy, excision of pylorus, and amputation at the hip-joint, and last, but not least, the introduction of the hypodermic injection of various medicinal agents.

It seems, however, and with shame we must confess it, that we are living in an epoch in which the labors and achievements of the greatest physiologists and surgeons, both living and dead, are forgotten and ignored; and for those who endeavor, even at a long interval, to follow their steps, the statute, which is a blot in the history of scientific progress in England, has been enacted, and enacted by those who are every day only too willing to avail themselves of the great advantages resulting from labors which now cannot be continued save under restrictions which are well nigh intolerable. Professor Tyndall has well said that "however noisy the fanaticism of the moment may be, the common-sense of Englishmen will not, in the long run, permit it to enact cruelty in the name of tenderness, or to debar us from the light and leading of such investigations." The great fact to be taught, the great fact to be learned, is, that to experimental physiology must we chiefly look for the means of lighting the paths traversed by those who work in the van of medical and surgical progress; who work conscious that, compared to what may be hoped for in the future, the advances already made are only — as Newton said of his greatest achievements — like those of a child playing with the waves as they break upon the sand. But,

> . . . "Strong in will,
> To strive, to seek, to find, and not to yield,"

they still labor to realize the fair aspiration that the book of Life may yet be read, not by the dim and flickering rays of opinion, but by the clear and steady light of ascertained fact.

I have mentioned many achievements in surgery the past half century has witnessed. Fifty years hence this great Association will, I hope, meet here again to celebrate its centenary, and my successor will, I trust, with greater ability and eloquence than I can command, tell of as great or greater triumphs than I have done. To enable him to do so we can all aid, some powerfully, others feebly; but still every unit in this great brotherhood can assist, and it should be our ambition as well as our prayer that, when the hour arrives for us to cease from our work, we may all feel on looking back on our lives that we have done something to that end: something — be it great or small — in the interests of our common humanity, in the interests of our country, and of a pure devotion to truth, to render the science to which we have devoted our lives, nobler and fairer than before.

Original Articles.

THE ROUTINE TREATMENT OF VENEREAL DISEASES.[2]

F. B. GREENOUGH, M. D.

One other disease of those classed as venereal remains to be spoken of, and it is the one which in point of frequency of occurrence stands at the head of the list. I refer to gonorrhœa. Undoubtedly many physicians look upon a mere case of clap as being of very little importance to the patient, and certainly of not much interest to the doctor. My experience has led me to believe that a smart case of clap is very likely to be a pretty serious matter for the possessor, and the fact that a disease differs decidedly from others of the same inflammatory type, and is extremely obstinate to treatment, ought to make it interesting to the student. We have in gonorrhœa an inflammation of the mucous membrane lining the urethra, which membrane, from its anatomical situation, occupies an exceptional position, in respect to being of necessity subjected to sources of irritation. Several times during the course of each twenty-four hours it is washed over by a fluid, — the urine, — which is acid in its reaction and holds various salts in solution, the irritating action of which is most conclusively proved by the excruciating pain caused by the act of micturition when the inflammation is at its height. In the conjunctiva we have a mucous membrane which, under exceptional circumstances, that is, during the act of weeping, is bathed by a fluid of somewhat the same nature, but less heavily charged with irritating salts; and yet the inflammatory result of a fit of crying on that membrane is well known to everybody. Besides being subjected to this special source of irritation, the mucous membrane lining the urethra has the peculiarity of being in direct continuity with that of the prostate gland, the bladder, and the convolutions of the epididymis of the testicles, so that the inflammatory process may, and in point of fact not unfrequently does, by simple extension, affect more important organs, producing troublesome and painful complications. As additional points of interest in the disease, I will merely refer to the fact that in some cases it seems to be brought forth by secretions which do not contain any specific virus, and to the mysterious sympathy which in some individuals exists between the urethra and the synovial membrane of certain joints, especially the knee, as a result of which an inflammation of the former will call forth an affection of the latter, subacute it is true, but very obstinate and annoying. Last, but not least, as a claim to the interest of the student and observer, is the fact that while the indications for treatment are very evident the results thereof are far from satisfactory. I am convinced that, unlike most inflammatory affections, that of gonorrhœa does not in the majority of cases tend to resolution and a return to a healthy and normal condition. Some time ago, at the Dispensary, for quite a time I treated all cases of gonorrhœa that had no complications calling for special relief in as near an expectant manner as was consistent with having them continue under observation; that is to say, with quite small doses of a simple diuretic, and quite a large proportion of them resulted in chronic affections. The endoscope has been the means of demonstrating to us how this takes place. As a result of long-continued suppurative inflammation the mucous membrane at a certain point loses its normal epithelial layer, and in its place we find a red, rough, pus-secreting surface, which consists of cellulo-vascular granulations of exactly the same nature as those which we see in any lesion of continuity of the cutis or mucous membranes resulting from a wound, burn, or any other cause. The moment we get an irregularity in the lining of the urethra we have the retention of a small amount of the urine behind it, which keeps up the irritation. The result of this granular condition in the urethra is, as elsewhere, the production of fibrous or cicatricial tissues, the tendency of which to contract is one of the best-known facts in pathological anatomy. Hence the marked influence of chronic urethral trouble in causing stricture. Exactly the same process goes on in plain sight of the oculist in those cases of chronic inflammation of the palpebral conjunctiva which result in "granular lids." We see there, in the first place, the conjunctiva become granular, then the granulations change into fibrous tissue, which, by contracting, pulls the lid inwards, so that the eyelashes actually press and rub against the eyeball. We have, then, in gonorrhœa, a disease which not only may by simple extension of the inflammatory process affect such important organs as the testicles and bladder, but has a tendency to result in certain structural changes of the urethra, the gravity of which is appreciated by every surgeon. One would think that, such being the case, the least that could be expected of the practitioner would be to carefully avoid doing anything that could aggravate matters, and yet a large proportion of cases of gonorrhœa are put on a course of urethral injections without any regard to the amount of inflammation which exists. Fully aware as I am of the benefit to be got from injections used properly, and they are invaluable, I thoroughly believe that had a urethral syringe, even so perfect an instrument as the Royal Excelsior P. never been manufactured, the mass of urethral patients would be better off than they are. The bad effect of injections is most especially to be noticed in the class of ignorant and stupid patients that we have to treat in the various out-patient services, and so frequently have I had reason to think that treatment by injections was absolutely doing harm in my service at the Dispensary that for some time I have all but dispensed with them except in chronic cases. Even theoretically I have never been able to understand how an astringent solution applied to an inflamed and highly congested membrane is supposed to reduce the inflammation. It is true that temporarily it causes a contraction of the capillaries, but if I remember my physiology correctly this is followed by a reaction, in which they are distended even more than previously. Of course, where for some length of time the astringent action of cold can be obtained by means of constant bathing or cold compresses, we can conceive of keeping this action up long enough to prove beneficial. In the conjunctiva we have a mucous membrane, the action on which of local applications can be watched, and our colleagues the oculists, or at least a great many of them, have come to the conclusion that the result of the use of strong astringent collyria during the acute stage of inflammation of that membrane is not satisfactory. In an acute case of clap we do have certain perfectly evident indications for treatment. Quiet and rest, in a recumbent position if possible, are important, and the diet should be such as will avoid increasing the irritating character of the urine. As this irritating action of the urine on the inflamed membrane is one of the chief sources of keeping up this inflammation, we should of course modify it if possible. This end may be accomplished in two ways: either by the exhibition of an alkali, and thus chemically neutralizing the acidity, or by increasing the watery constituents of the fluid, rendering it more dilute and consequently less irritating. In the alkaline diuretics we have the means of obtaining both of these desired results. They are best given in flax-seed tea, barley-water, or any other demulcent drink. The anti-blennorrhagics, copaiva and cubebs, have a very varying effect in different cases. In some they seem to have a marked action in cutting down the discharge, in others the action is not appreciable. The oil of sandal wood is even more uncertain, but in my experience it rarely does much good during the earlier stages of the disease; later, at times its action is little short of marvelous. As the inflammatory symptoms disappear we can begin cautiously with a mild injection, the sensations of the patient being a very reliable guide as to the propriety of going on with them or not. I believe that if the injection causes anything like real pain or scalding it will be worse than useless. One other point with regard to urethral injections should not be lost sight of, and that is, that in the same way that a lesion of the skin or mucous membrane cannot heal if constantly cauterized, so no urethra can return to its normal state of dryness while astringent solutions are being squirted into it three or four times a day.

---

[1] The Master of the Rolls.

[2] Concluded from page 149.

I should be very sorry to be understood to claim that even by using the greatest possible caution and care in treatment we can be sure of escaping the complications by extension of inflammation which I have spoken of. On the contrary, some of the cases that have followed all directions in the most conscientious manner will have as serious a time as those that have kept up drinking and every sort of imprudence, or who have been treated by too strong injections. But it certainly must be a comfort to the conscientious practitioner to feel, when he sees his patient suffering the tortures which a smart combination of cystitis and prostatitis is accompanied by, that his treatment cannot have been the means of producing this condition. Under the most careful treatment cases of gonorrhœa often are very obstinate and troublesome. We hear of a certain method of treatment curing all cases in a few days, and perfectly honest gentlemen will tell you of cases that they have had no trouble in discharging well in a week or two. It is impossible for me to reconcile such statements with my personal experience without some means of explaining the apparent direct contradiction of facts. This explanation, I think, may be made in two ways. In the first place, many patients are undoubtedly discharged as well when they have by no means arrived at that condition. They are told that the slight discharge that they find, especially in the morning, does not amount to anything, and that it will in time wear away, which it sometimes does, and then again not unfrequently it does not. Again, there exists in the community quite a large class of men who will tell you that they never "can see a woman even" without getting caught. Such cases are generally cured very quickly, and the chances are that some friend of theirs to whom they have given the prescription which worked so well with them is much disgusted to find that it has no effect, or certainly not a beneficial one, in his first case of gonorrhœa. The fact is that these patients do not get infected each time, but that they have a chronic urethral trouble from which they never are free. This may during quiet life be in such a quiescent state as not to cause any appreciable amount of discharge, but the excitement of the sexual act will start it up, and it merely requires abstinence from alcohol and an astringent injection to put it back into its latent condition. If you examine the urine of such cases you will find several long shreddy filaments floating in it. The importance of these filaments, by the bye, as a means of diagnosis, is not sufficiently referred to in the books. On introducing an olivary instrument you may or may not get a little hitch on passing by a certain point; but you will be pretty sure, unless there is a decided hitch, showing that fibrous tissue has already formed, to find that a drop or two of blood will follow the instrument. In short, they have chronic trouble of the urethra, which is aggravated by coitus, and this aggravation is a very different affair from a smart fresh case of gonorrhœa. I will not enter into the misery which attends the treatment of many of these chronic cases, and merely refer to the importance and interest which they possess for the surgeon when they have gone on to the point where contraction begins; in other words, have become cases of stricture. It is too soon yet to speak with any confidence, but I hope that in the soluble gelatine bougies we may have an important agent in treating chronic cases. The irrigator described by Dr. Harrison, of Liverpool, is of great value in some cases, but like every other method of instrumental interference with the urethra it sometimes starts up an acute exacerbation. It consists in simply a velvet-eyed soft catheter of three or four sizes smaller calibre than the meatus, which is introduced beyond the seat of urethral trouble, and by means of a bulb syringe a stream of medicated fluid is gently washed from behind forwards.

The nature and magnitude of the subject I have attempted to treat of is such that, even after having abused your patience to the extent which I have, I have merely been able to skim from the surface the froth, as it were, of the main points of interest in the indications for treatment of venereal disease. What I have more especially endeavored to do, however, is to call attention to some of what seem to me to be decided and not uncommon mistakes in treatment, which I have taken the liberty of calling routine, and these are the use of caustics on chancroids or chancres, herpetic abrasions, or other local lesions of the penis, the prescribing specific treatment in cases where a doubt exists as to the diagnosis, and the abuse of astringent injections during the inflammatory stage of gonorrhœa.

I should be very sorry to be thought to have been pleading for the need of special treatment in venereal diseases generally. On the contrary, there is nothing in the great majority of cases which the general practitioner should not be perfectly able to see to, but I do think that the patient has the right to expect the same amount of interest in his case, as well as of knowledge, experience, and common sense, that he would if he were being seen through a case of typhoid fever or treated for a fractured thigh.

◆

REPORT ON PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.

BY FREDERICK I. KNIGHT, M. D.

OPERATION FOR A RECTIFICATION OF A DEFLECTION OF THE NASAL SEPTUM.

Dr. W. C. Glasgow[1] objects to the removal of a portion of the septum by punch or scissors, or otherwise, as likely to produce deformity of the nose, and advocates an operation (a modification of Mr. Adams') proposed by Dr. Steele, of St. Louis. In many cases the resiliency of the septum is so great that Mr. Adams' method will not suffice. Dr. Steele's modification consists in making a stellated division through the mucous membranes and cartilage, and a forcible reposition of the divided septum, which is retained in position by plugs. The division of the cartilage destroys, in a great measure, its resiliency, and the plugs are more to give support than to exert pressure. The instruments necessary for the operation are stout forceps shod on one blade with knifes set in a stellate form. The two blades are united after the manner of obstetrical forceps, to facilitate the introduction and withdrawal. The cutting blade is covered with a thin sliding shield to protect the nostril from laceration during insertion. Any strong, stout blade, or Mr. Adams' septum forceps, may be used to push back the divided septum to the natural line. The plugs are made of ebony or ivory, and must be made to suit each individual case. They should be made thick enough to give support to the replaced septum, and sufficiently long to reach from the inferior meatus to the tip of the nose. An important feature of the plug lies in the pointed shoulder which is inserted in the sulcus at the tip of the nose. It is thus retained safely in position; it is concealed from view, and can easily be withdrawn by the patient. The patient should be etherized, or put under the influence of nitrous oxide. The cutting blade of the forceps, covered by the shield, is introduced into the *unobstructed* nostril, and the shield withdrawn; the second blade is then introduced into the closed nostril, and the blades securely locked; forcible pressure is brought to bear and the cartilage divided; after unlocking, the blades are withdrawn; the septum is then forcibly crowded back and a proper plug immediately inserted. As a rule the plugs should be retained in place four days. Afterwards they need be worn at night for five nights. The plugs should excite little or no pain if properly fitted. If they are too long, they press on the turbinated bone, and give rise to pain. They are completely hidden within the nostril, producing slight distention with little deformity.

---

[1] Archives of Laryngology, January 1, 1882.

LARYNGEAL WHISTLING.

Dr. G. O. Roe reports the very interesting case of a young lady who possessed the power of whistling tunes with the larynx without the aid of the lips. The tune was perfectly produced in quite a low key, and sounded as if the young lady were at a distance. The following laryngoscopic appearances were noted by Dr. Roe as she whistled "Yankee Doodle" in this manner. On producing the whistle, the vocal cords were drawn tense, and the chink of the glottis nearly closed. The ventricular bands were approximated and puckered up, leaving an elliptical opening in the centre though which the vocal cords could be seen with their thin edges vibrating. The contraction of the ventricular bands was assisted by the contraction of the thyro-ary-epiglotticus, as the epiglottis and arytenoid cartilages were more or less approximated; but on producing high tones the arytenoid cartilages were drawn up under the epiglottis instead of the epiglottis being drawn downward.

Thus it could be directly seen that the fundamental tones of the laryngeal whistle were produced by the vibrations of the edges of the vocal cords, the tone being modulated by the minute adjustment of the ventricular bands, which regulated the laryngeal opening above the cords.

In addition to the assistance of the ventricular bands in modulating the tone, they also pressed firmly down on the vocal cords, closed the ventricles, and acted as a damper in preventing the cords from vibrating except for about one third of their length in the centre.

This young lady had also some ventriloquial powers. This led Dr. Roe to examine the larynx of a professional ventriloquist. He discovered that this gentleman produced the primary ventriloquial tones in precisely the same manner, that is, the larynx assumed exactly the same shape that the young lady's did while whistling. He was unable to produce a laryngeal whistle, but he told of two other ventriloquists who were able to whistle very loudly with the larynx alone, the mouth being closed, and who could give beautiful imitations of canaries, and other whistling birds.

THE QUESTION OF HÆMORRHAGE AFTER TONSILLOTOMY.

Dr. George M. Lefferts gives us an instructive article upon this subject.[1] Referring to the great diversity of opinion on this subject among the profession, so great that one man hesitates to operate at all, while another says there is no danger, Dr. Lefferts says the truth lies between the two extremes, and may be summarized thus: —

(1.) A fatal hæmorrhage after the operation of tonsillotomy is very rare.

(2.) A dangerous hæmorrhage may occasionally occur.

(3.) A serious one, serious as regards both possible, immediate, and remote results, is not very unusual; and

(4.) A moderate one, requiring direct pressure, or strong astringents to check it, is commonly met with.

Still in a large percentage of cases, certainly a majority, no trouble after the operation is experienced, the bleeding quickly ceasing, either spontaneously or by the use of a little ice.

Taking up these classes of cases seriatim, Dr. Lefferts remarks in regard to the first, that fatal or uncontrollable hæmorrhage from the internal carotid artery, the result of any direct surgical procedure, is very rare. At the present moment the majority of cases of this accident which are upon record, contrary to what is generally supposed, do not concern the operation of tonsillotomy, but have occurred during an operation upon the tonsil, or in its neighborhood, for other causes, such as the puncture of a retro-pharyngeal abscess, opening a pulsating tumor of the tonsil, opening of a supposed abscess, the operation for sarcoma of the tonsil, for malignant disease, etc. In those few cases where profuse hæmorrhage has occurred after the removal of a portion or of all of the tonsil with the knife, and where the common carotid artery has been tied to check it, the question is an open one (except perhaps in the instances reported in Velpeau) whether the lesion was of the internal carotid and not of some other vessel. Hæmorrhage to an extent requiring operative interference for its arrest does not always proceed from the internal carotid after such accidents as the above. It may come likewise from the large tonsillar branches of the important ascending pharyngeal artery, or from this artery itself, and likewise in good quantity from the tonsillar branches of the facial (or external carotid), to say nothing of the venous hæmorrhage, profuse in its outset, which comes from the abnormally enlarged and dilated blood-vessels in an old hypertrophied and long-inflamed tonsil. The internal carotid artery has thus far never been wounded when the tonsillotome has been used. If a hæmorrhage is from the internal carotid, it must of necessity be profuse, and will demand, primarily, immediate arrest, if possible, by direct pressure, or by hooking up the tissues by means of a tenaculum, and ligating them *en masse*, and, secondarily, if these means fail, ligature of the internal — *not* the common carotid. The most recent views are in favor of ligature of the internal carotid in such injuries, and this on both sides of the lesion.

Of the second class, that is, dangerous hæmorrhage, Dr. Lefferts gives two cases, one operated on with the bistoury and the other with the tonsillotome. The hæmorrhage was profuse, and was finally checked in one case by pressure, and in the other by twisting a large bleeding artery. Dr. Lefferts thinks the source of the hæmorrhage must have been the ascending pharnygeal artery, a vessel of large calibre, and in intimate relation to the tonsil, and one which on this account should receive more attention than is usually accorded it. Gray tells us that it ascends in the neck between the internal carotid and the side of the pharynx, and that the largest of its pharyngeal branches goes to the tonsil. It is given off directly from the main trunk of either the external or, more rarely, the internal carotid.

---

[1] Archives of Laryngology, January, 1882.

In regard to the third class the author says the hæmorrhage may come from the opening of a part of the rich venous plexus at the bottom of the tonsillar fossa, or from the section of an arterial branch in the tonsil. Pressure, or if possible, isolation and twisting the bleeding point is the treatment indicated. Should a hæmorrhage persist or be of more than the usual moderate amount, and should it specially occur from the face of the cut tonsil, a differential diagnosis must be made. Usually it will be found in a single bleeding point, and can then be appropriately treated. Above all, the patient should be kept under observation for a time, at least till the question of immediate recurrence is beyond doubt. If the throat is intolerant reliance may have to be made on pressure. The author places little reliance on the use of the persulphate of iron. In case it has been used without success in checking the bleeding, no time must be lost in removing the clots, etc., and seeking out the bleeding point.

In regard to the last class, moderate hæmorrhage — one requiring more than the ordinary means to control it, Dr. Lefferts calls attention to two causes, one of which, he believes, is not generally appreciated. An old, much indurated and hypertrophied tonsil, one long chronically inflamed, will have large nutrient vessels, and their section will be followed by an immediate, more or less profuse, flow of blood. This hæmorrhage is, commonly, mainly of venous blood, and, as a rule, quickly ceases. The second cause is more important. It is not an uncommon thing, when the tonsil is greatly hypertrophied, so that it fits with difficulty into the largest tonsillotome, and the faucial pillars, especially the anterior, are tightly spread out over the surface of the gland, to cut away a portion of the latter (its anterior surface, or more rarely a portion of its edge) as you make the section. The tissues immediately retract, and the small arterial branch which runs in the faucial pillar is held open, giving rise to a persistent bleeding, small in amount, as a rule, though the author has seen it profuse, but enough to alarm the patient, and require direct treatment. This wounding of the anterior pillar is one of the commonest causes of *excessive* sore throat after the operation of tonsillotomy. To check this last form of hæmorrhage direct pressure, or application of silver nitrate in substance to the bleeding points, must be resorted to.

OBSTRUCTION OF THE NARES A CAUSE OF ASTHMA.

Dr. Wm. Porter, of St. Louis, says[1] that in not a few cases asthma is undoubtedly the result of nasal polypi, or more rarely of hypertrophy of the pituitory membrane. The literature upon this subject is both recent and meagre. Voltolini is credited by Fraenkel with the first observation (1871) of nasal polypus in relation to asthma.

Dr. Porter reports cases showing the relief from asthma by the removal of polypi or thickened pituitory membrane, which is not always permanent because bronchial lesions may have been produced by the long continuance of the irritation.

Dr. Thos. F. Rumbold, in the same journal, reports similar cases, and goes so far as to say that every asthmatic patient whom he interrogated on the subject, over fifty in number, stated that he had been having severe colds in the head each fall and spring for a number of years previous to the first attack of asthma.

Pertinent in this connection is a paper of Dr. Wm. C. Glasgow's[2] on

LARYNGITIS AS A CAUSE OF BRONCHIAL SPASM.

This cause of reflex asthma the author fails to find recorded in any of the authorities. A number of cases are given showing the relief from asthma by local treatment of the larynx. In these cases no permanent relief is obtained till the laryngitis is cured.

It is interesting to call to mind in this connection the treatment of the larynx by Dr. H. I. Bowditch by local applications of iodine solution in cases of asthma in pre-laryngoscopic times. How well do we remember the picture of the doctor standing over his asthmatic patient, sponge-probang, moist with iodine, in hand, waiting for the finger of the patient to rise as a signal that inspiration was completed, and that the time for the application had arrived. If some of our laryngoscopists would observe this precaution more frequently, especially in applying silver nitrate solutions, their patients would suffer much less.

PREVENTION OF HAY ASTHMA BY LOCAL TREATMENT OF THE NASO-PHARYNX.

Dr. W. H. Daly[3] reports three cases in which the destruction of hypertrophied mucous membrane of the turbinated bones, removal of a nasal polyp, and other local treatment appropriate to a chronic catarrhal condition of these parts prevented the recurrence of hay asthma, although one of the patients had suffered previously every year for twenty-one years.

REMOVAL OF NASAL POLYPI.

Dr. Morell MacKenzie,[4] at the conclusion of an interesting chapter on nasal polypi, says that the mode of treatment which he generally adopts is to remove them with his punch-forceps, and then to apply electric cautery to the base of the growths. When recurrence repeatedly takes place, if the growth springs from one of the turbinated bones, he removes a portion of the bone by means of a special instrument devised for the purpose. It consists of fine, hollow forceps, having toothed edges on one side, and smooth edges on the other, whilst between the two a sharp cutting blade can be rammed down. If both blades of the forceps have cutting teeth the instrument cannot be easily removed after the bone has been cut through, hence a separate instrument is required for each side of the nose. The portion of turbinated bone required to be removed is seized by the forceps, the smooth blade being on the outer side. The knife is then pushed home, and the portion of the turbinated bone easily removed. Dr. MacKenzie says that while he considers the removal of a portion of one of the turbinated bones perfectly harmless, he regards it as an operation seldom required.

(*To be concluded.*)

---

[1] Archives of Laryngology, April 1, 1882.

[2] Archives of Laryngology, July 1, 1882.

[3] Archives of Laryngology, April 1, 1882.

[4] Archives of Laryngology, April 1, 1882.

Hospital Practice and Clinical Memoranda.

TREATMENT OF VOMITING BY ABSTINENCE FROM FOOD AND MEDICINE.

BY S. G. WEBBEB, M. D.,

Visiting Physician Boston City Hospital.

Sometimes vomiting is a very troublesome complication in disease of other organs than the stomach. In Bright's disease, in various functional as well as organic nervous disorders, in uterine affections, in cardiac and lung diseases, the physician is at times annoyed or becomes anxious as to the result on account of the obstinate vomiting; the derangement of the stomach becomes more important than the original disease. Effervescing drinks, oxalate of cerium, creosote, small doses of ipecac, hydrocyanic acid or tincture of nux vomica, bismuth, and various other remedies do not give relief, but seem rather to aggravate the symptom by exciting the vomiting afresh.

It is not necessary to inquire now why vomiting is thus persistent; there seems from some cause to be an irritability of the nerve centres, such that the presence of anything, even water, in the stomach serves to excite the reflex act of vomiting, and the more frequently this happens the more is the irritability of these centres increased. This condition may be due to disease, primarily or secondarily, or it may be produced by unwise medication.

Often the best method of treating this complication is to give the stomach rest. Sometimes only a large amount of food taken at one time excites vomiting; then it is sufficient to resort to frequent feeding, giving a very small quantity each time, a mouthful, or a spoonful every fifteen to thirty minutes; thus the stomach never contains a large mass of food requiring considerable muscular exertion to roll it about and by its weight or bulk exciting the reflex irritability of the nerve centres. Many times, however, this is not enough, the stomach requires more complete rest, and the best treatment is to withhold all food and medicine; sometimes a few hours rest is enough, again it requires two or three days, as in one of the following cases; then it will be necessary to use nutrient enemata. Where there has been much vomiting thirst may be very annoying to the patient; small lumps of ice held in the mouth will relieve this, and generally do not cause vomiting. After the stomach has had sufficient rest it is best to commence feeding by the mouth with caution, giving a little frequently. Milk and lime water, equal parts, a teaspoonful every half hour, should be first tried; if well borne the amount can be increased gradually. It is a mistake to increase the quantity too rapidly. Some patients do better on soup, or Mellen's or Ridge's food, or on scraped raw beef. The following cases are a few from many which might be reported: —

Bella L., aged twenty-two, transferred to nervous and renal service from medical service August 25th. About one year previous was out in hot sun for a long time and next day did the week's washing; during these two days had headache, nausea, and vomiting, with dizziness; was confined to bed one day. Soon after had pain and weakness in both iliac regions, which increased in severity till Christmas. She seemed to be suffering from general nervous weakness, there being no organic lesion. She had slight nausea at times, with dyspeptic symptoms till September 12th; there was so much nausea and vomiting that she was given only milk and lime water; on the 15th all medicine and the milk were omitted, and later in the day she was given scraped beef. The vomiting still continued, and on the 17th she was to have nothing by mouth, and to receive an enema of one egg beaten up with ten grains of pepsin every four hours. Four days later she was given every two hours a tablespoonful of chicken soup, and the alternate hours the same amount of Mellen's food. This diet was continued, the amounts given being increased till October 8th, when other articles were added to the diet. November 1st, it is recorded: "Not much nausea for some time; pain sometimes worse than at others. Can walk well for a few minutes, then is tired and has more pain. Has consciously been gaining strength. Feels much less nervous.

The treatment was at first directed to the condition of the nervous system; she received first ext. nuc. vomic., one third grain, ext. belladonna, one sixth grain, zinci. oxid., two grains, in pill, three times a day. When the stomach becomes irritable, bismuth and the hydrocyanic acid were used. Dry cups and iodine were applied to the back, but after the stomach showed so much irritability the measures used were directed to that.

Jane L. D., aged twenty-nine, entered December 15th. Had had about a year previously rheumatic pains in knees and calves of legs, which lasted all winter. Three weeks before entrance she began to have nausea and vomiting; the vomiting recurred daily; the vomitus was greenish and slimy; the vomiting occurred immediately after eating or drinking. There was great tenderness over the epigastrium. She had been working very hard, making long days at sewing. There was very slight œdema of feet; urine acid; 1020; trace of albumen; a few pus and a few blood globules; no casts.

All food was omitted for several hours, then milk and lime water was given in ounce doses every hour. She had no more nausea, and shortly after was able to take a reasonable amount of nourishment.

Delia L., aged thirty-four, married; has a history of syphilis; entered the hospital for a chronic ulcer of the leg. She had headache and vomiting, the latter being very obstinate. There was no albumen; no casts in urine. All medicine and food was stopped, and after some hours she was fed on a mixture of milk and lime water, equal parts, one teaspoonful every hour. The amount given was increased gradually and the proportion of lime water diminished. After three days she took three ounces of mixture, milk six parts, lime water one part, every hour, with a little bread; the next day she had half a pint of milk every two hours, and soon was able to take ordinary diet.

TWO CASES OF EMPYEMA.[1]

BY H. E. MARION, M. D.

Case I. Mrs. E. H., widow, forty-eight years of age, born in Nova Scotia; by occupation a seamstress. Has been under the care of a homœopath for the past six weeks. Not improving and having asked assistance from the city, by direction of the Overseers of the

---

[1] Read before the Boston Society for Medical Observation, March 22, 1880.

Poor I saw her. The history of her sickness pointed directly to trouble within the thorax. Physical examination gave flatness from above the nipple on right side to the lower part of the chest, front and back. There was absence of respiration and vocal fremitus; ægophony just at and above the line of dullness; also cough, frequent pulse, elevated temperature, loss of appetite, and extreme debility, not improving on generous diet, stimulants, and tonics. On the nineteenth day after I first saw her, I aspirated the chest between the eighth and ninth ribs midway between the axillary line and a line passing through the angle of scapula, using a medium-sized needle. Five hundred and forty grammes of thick pus was removed.

On the twenty-sixth day I removed four hundred and eighty grammes, using the largest needle I had. Accidentally considerable air entered the thoracic cavity. For several days after this operation she did not feel quite so well; chest wall was sore to touch.

On the thirty-third day she still had considerable cough, but the appetite was improving. Pulse 96 to 100; temperature 99° F. Line of flatness at angle of scapula or a little below.

Fifty-second day. Gradually improving. Pulse between 80 and 90; temperature from 98° to 100° F.; is now normal. Finger ends bulbous. Burning in palms of hands and soles of feet, face a little puffy. One foot swollen. Urine free from albumen and casts. Scarcely any respiration on right side. Apex beat to the left of its normal position. Absolutely no cough for some time past; appetite fair, and has been gaining flesh. Can walk some distance without fatigue. The heat prostrates her very much. Advised her to go into the country, and to call assistance or return home immediately she began to grow worse.

One hundred and forty-first day. Returned from the country very much improved in every respect. Has had severe attacks of coughing and vomiting of thick pus: "Just like what came out of my side." The first time it occurred was during a violent fit of coughing when she was almost strangled.

One hundred and fifty-third day. I called to see the patient and learned that she had resumed her work as seamstress in town. Two days previous while stooping to button her boots, suddenly and without warning, she vomited a large quantity of pus, almost choking her.

One year and seventeen days from the time I first saw her she called at my office, informing me that she had worked every day for the past eight months, but with more or less suffering.

CASE II. On March 26, 1881, I was called to see J. C., a strong, vigorous young man, sixteen and a half years of age, a student in the High School.

Five weeks previous to this visit I saw him suffering from an attack of acute tonsillitis; possibly he had not felt quite as strong since. The day before he attended his grandfather's funeral; after his return he had a severe chill followed by headache and pain in the side, increased by deep inspirations; he passed a feverish, restless night, and I saw him in the morning; *besides* the above symptoms he coughed, breathed rapidly, with frequent pulse, elevated temperature, and bloody sputa; there was dullness at both backs, just at the base on right side and extending to angle of scapula on the left with feeble respiration, and possibly very fine crepitant râles.

On the following day, the third of the illness, the dullness on the left side was more marked, and fine râles could be heard over the whole lower lobe of left lung; resonance under left clavicle with no increase of dullness at right back; bronchial respiration followed; cough; rusty sputa, and herpes labialis; pulse ranged from 100 to 120; temperature from 102.5 to 104° F. These were the prominent symptoms until the eighth day, when I noticed the heart beating at the right of the sternum; his breathing had become more rapid with increasing dyspnœa; temperature the same; pulse more frequent.

On the ninth day pulse small, of unequal force, and at the rate of 120 to 140 in the minute; severe pain in left side with short, dry cough on expiration; apex beat still farther to the right; absence of respiration at lower part of chest with flatness on percussion. These symptoms increased in severity during the day and evening. At midnight the pulse was 150, threadlike and irregular; respiration very rapid and labored; skin cyanotic; absence of respiration and vocal fremitus over the entire left side; apex beat at right nipple; temperature 103.5° F.; patient bathed in cold perspiration.

Under these circumstances I proceeded to aspirate in axillary line between ninth and tenth ribs; two thousand four hundred grammes of serous fluid with a little pus was removed. The aspiration, which was somewhat delayed by plugs of fibrine in the needle of the aspirator, afforded great relief. Heart swung back beneath the sternum; pulse frequent but regular, with more force and volume; temperature the same.

The symptoms remained about the same during the tenth and eleventh days, temperature reaching 104.5° F. on the twelfth with cough and rusty sputa; these symptoms, coupled with a physical examination, gave evidence of a pneumonic process extending over middle and upper lobes of right lung; so that on the thirteenth day of his illness, and fourth day after aspiration, he exhibited the rational and physical signs of pneumonia of middle and upper lobes of right lung. There was feeble respiration just beneath the left clavicle and at the very base of right side.

Every day gave evidence of increasing effusion into left pleural cavity. Although the patient looked very badly I desisted from interfering until either resolution should be established in the right lung or the symptoms should point to a rapidly fatal termination.

On the evening of the seventeenth day of his illness, the eighth after the aspiration, his temperature fell to normal, pulse came down to 100, and he was bathed in a profuse perspiration; at this time the fluid had reached to the level of the nipple; heart again pushed to right of sternum.

On the eighteenth day, two days after resolution was established in right lung, he being much distressed as to his breathing, and the effusion rapidly increasing, I again aspirated, removing 1320 grammes of thin, odorless pus, with marked relief to patient.

On the twenty-second day symptoms again became aggravated; evening temperature 101° F.; pulse 120 to 140; respiration 32; more dyspnœa; hectic; bed sores over sacrum. He was anxious to be again aspirated. Agreeably to a promise made him at the previous aspiration, I used ether; it required but a little to make him unconscious. Patient was placed in a sitting position, and 570 grammes of odorless pus was removed with not a little trouble, caused by flakes of fibrine floating against the open end of the canula; more doubtless might have been removed, but the exhaustion of the patient was so great, and his breathing under ether being poor, I desisted.

On the evening after the operation the temperature was 99° F., pulse 110. He complained of pain in both sides.

On the twenty-seventh day of his illness my notes are as follows: Pulse has remained between 120 and 130; temperature from 100° F. to 101° F.; there has been considerable cellulitis around last puncture which has caused a good deal of annoyance; last night he had severe pain in right side; a dry friction sound or squeak can be heard at the lower part of right back; impulse of the heart can be seen just at the left of the sternum; other symptoms remain about the same. On the twenty-eight day pleural friction could be heard over right back and side, below nipple; there was no evidence of air entering the left lung except, possibly, at the very apex; pulse 120; temperature 100.2° F.; respiration 26. Removed 2430 grammes of slightly offensive pus. Resonance from about four centimetres below the nipple upward.

Thirty-fourth day. During the past few days the pulse varied from 110 to 140 on slight exertion; temperature from 99° F. to 101° F.; the cavity has gradually filled; bed sores healed, and he can slip from bed to chair without assistance; perspires freely. Tapped the chest, using large-sized trocar with rubber tube attached, the distal end of tube being immersed in vessel of water placed on the floor, thus acting as a siphon; 1920 grammes of thick, offensive pus was removed; enlarged the opening, and washed out the cavity with solution of carbolic acid; introduced tent, and dressed with an oakum compress. He was very much exhausted by the operation, and looked badly for some time. Thirty-eighth day. Pulse 120; temperature 100.8° F.; respiration while sleeping 26; temperature reduced one half degree by usual operation of washing out the chest; pus thick and offensive; capillary circulation very poor; bed sores again troublesome.

Forty-eighth day. Pyæmic symptoms marked; pulse 120; temperature 99° F. to 100° F; respiration 26, unilateral; abscesses and sloughing of tissue over back and sacrum wherever there is pressure from a fold in the clothing; emaciation extreme.

Seventy-ninth day. During the past month he has had his "ups and downs;" on the whole has been gradually improving; appetite better; his chief diet has been of late baked beans; he has gained, too, a little in flesh; can walk from one room to another; the pleural cavity has been washed out, at first daily and later every other day; right lung in good condition; the left lung has expanded a little; respiration fair at the upper part; dropping of fluid can be heard from within the pleural cavity; chest has fallen in.

One hundred and ninth day. Is now able to walk out, and is gaining rapidly. A tube inserted into the chest with a bottle attached, which he carried in his pocket, was substituted for the tent, and the cavity washed out daily. Chest much fallen in antero-posteriorly; lung expanding; eats and sleeps better.

Two hundred and third day. Removed the tube; heart beat under and a little to the left of sternum; respiration can be heard about five centimetres below nipple.

Two hundred and eleventh day. No trouble has arisen from removing the tube, and no evidence of the reaccumulation of fluid; has gained much in weight and strength.

It must be a source of profound satisfaction to those of our profession whose names I need not mention in this presence to review the various opinions expressed and compare the practice of to-day with that of comparatively a few years ago, when by their united efforts the science of medicine received a fresh impetus by their practicing and teaching paracentesis thoracis.

I purposely forbear repeating any part of the literature of empyema. I have reported these cases thinking they illustrate points of sufficient interest to engage the attention of this Society for a few moments. The case of Mrs. H. well illustrates the conservative treatment. Time was when the popular practice was to make a permanent opening at once, having demonstrated the presence of pus in the pleural cavity. In this case the patient was aspirated twice, and a large amount of pus was removed at both times. After the last operation the patient began to improve in every respect as to her general condition, still with a demonstrable amount of pus in the pleural cavity. The improvement was so marked that the operation was not again repeated, but she was sent away into the country, with directions to return or seek advice in case she did not continue to improve. Nature, in a short time, made a permanent opening into one of the bronchi, thus saving her the annoyance of a permanent opening through the thoracic wall, and reducing to a minimum the chances of septic infection.

In these days of antiseptic surgery we are taught to look with horror upon the admission of air to a fresh wound unless it be surcharged with some antiseptic material. In this case, as I then thought, carelessly on my part, air entered the chest freely at the second operation, but, apparently, no evil resulted therefrom.

In the second case the first question of interest is that of diagnosis.

During the first week, I have no doubt in my own mind, from the rational symptoms, chill, cough, rusty sputa, hurried and painful respiration, frequent pulse, and high temperature, herpes, severe pain in the side, together with the physical signs, dullness with subcrepitant râles, followed by flatness, dislocation of heart, and œgophony, that it was a case of pleuro-pneumonia with effusion.

After the first week the patient was seen by Drs. I. L. Hildreth, E. H. Stevens, and Otis H. Marion at different times, so that every subsequent stage of the disease came under the observation of more than *one* individual. With pleuritis of the left side, and pneumonia of the lower lobe of the left lung, effusion *came on* gradually, rapidly increasing on the eighth and ninth days. A large amount of serum with some pus was removed. After an interval of twenty-four to forty-eight hours the middle and upper lobes of the right lung became involved, showing all the rational and physical signs of pneumonia. This ran through its course in seven days, when resolution was established with colliquative sweat, subsidence of temperature, falling from 104.5° F. to normal, and pulse from 140 and 150 to 100. Following the resolution of pneumonia of the right lung he was again aspirated, this time a large quantity of odorless pus being removed. In *ten* days after resolution of the pneumonia of the right lung he had a severe pleuritis of the right side, over the middle and lower lobes. During those ten days he was aspirated twice. A permanent opening was not made until the pus was found to be offensive, and the patient had for three or four days shown unmistakable signs of pyæmia.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY M. H. RICHARDSON, M. D., SECRETARY.

REMOVAL OF NASO-PHARYNGEAL TUMOR.

JANUARY 2, 1882. DR. HOOPER said: At one of the recent meetings Dr. Knight explained the method of removing hypertrophied tissue of the turbinated bones by means of the Jarvis snare, and showed the instrument. In order to point out the usefulness of this instrument in operations about the post-nasal region I wish to show this tumor, which was removed from the naso-pharyngeal space with the Jarvis snare, and which I do not think could have been gotten rid of in any other manner more thoroughly or with less discomfort to the patient. The No. 5 piano wire, used in the snare, is elastic, yet so stiff that the noose does not get out of shape, which is the secret of being able to pass a noose through the anterior nares large enough to take in a tumor of this size. With the aid of the rhinoscopic mirror, and with gentle manipulation and coaxing for about three qurters of an hour, the tumor finally insinuated itself into the noose, and the wire was drawn up to its base and the tumor removed.

EMPYEMA.

DR. MARION reported two cases of empyema, which are published in full on page 180.

DR. BOWDITCH said that he felt great interest in this paper and subject. He was satisfied, thirty years ago, that it was at times not only unnecessary but wrong to make a permanent opening into the chest for the evacuation of pus. He had in mind the case of a little girl with a purulent effusion in the pleural cavity many years ago, who was aspirated twice without success. At the third operation the needle was introduced into the chest just below the axilla, and pus was withdrawn. The wound did perfectly well, and the child recovered without any further trouble. It is impossible to get out all the pus with an aspirator, and it is absurd to say that we can. Even where a free incision is made it cannot be done, a small amount remaining in the dependent parts of the cavity. The occurrence of pneumonia on one side and pleurisy on the other is very rare and interesting. It gives the impression of great skill and assiduous care on the part of the attending physician. The great success of the case was brought about by relieving one side with the aid of art and leaving the other to Nature.

DR. SUMNER asked Dr. Bowditch whether he would not try to remove all the pus from the chest.

DR. BOWDITCH replied that in case of aspiration it would be impossible, and he should not attempt its entire removal. There must be some matter left, because the opening is not at the bottom of the pleural sac. With regard to the use of antiseptic precautions, he thought he used to get just as good results without them where he used warm water merely.

DR. J. S. GREENE said he was at present attending a case of empyema in a child of four years. He had aspirated twice, at the first operation getting an ounce of pus, and at the second an ounce and a half. The pus was very thick indeed, and would not run through the needle, being stopped apparently by flocculi of some kind. He would ask Dr. Bowditch, or any other member of the Society, the best thing to do now.

DR. BOWDITCH replied that he should try a very neat apparatus devised by Dr. F. H. Williams for the washing out and evacuation of the bladder and other cavities of the body. He should also try injecting a little liquor sodæ chlorinatæ into the sac.

DR. POST said that he understood the reader to say that he considered an opening into the bronchi preferable to an opening through the chest wall, and asked him why he was of this opinion.

DR. MARION replied that he intended to say that it was less annoying to the patient than the external incision.

DR. BOWDITCH said he was taking care of a case now which he had thought was going to get well. The patient injured herself by falling on her side. No attention was paid to the complaint for five or six weeks, till she began to complain of dyspnœa. On examination, flatness of one side was found. Evidently there was a collection of something in the chest. The attending physician wished to operate, but was dissuaded by two others who were called in consultation. About one month after this the patient suddenly vomited about a quart of pure pus. Later she had other similar attacks, raising considerable quantities of purulent matter. These attacks were preceded by fever, acceleration of pulse, and other signs of pus. In the early days of the case the heart was dislocated to the right. No operation was done till about two weeks ago, when Dr. Bowditch saw her, and advised tapping. The heart was to the right, and there was flatness of the left side. There was absence of respiratory murmur. No râles, and no evidence of a cavity. There was a little of the resonance, such as is seen in pleurisy, under the second and third ribs in front. Elsewhere the respiration was about *nil*. There was enlargement in front rather than behind or at the sides. The flatness was so great that he thought a large amount was in the pleura. He therefore advised a permanent opening to be made. Between that time and this there have been four aspirations. The first time the lung was tapped, and nothing but blood withdrawn. At that time he had come to the conclusion that the injury had caused an abscess of the lung which filled the whole chest.

Generally speaking, we can get a distant sound where the lung is anywhere near the ribs. But in this case there was complete absence of respiration, with very great dullness. Between the first and second aspirations (about a week) she began to improve. Aspiration was again tried; this time in the axilla, with the same result.

Dr. Bowditch thought that the escape of pus, without an accompanying pneumo-thorax, indicated an inflammatory process, which cut off air from the rest of the pleural sac by the formation of thick membranes.

FIBROID TUMOR OF UTERUS.

DR. CHADWICK exhibited a specimen of fibroid tumor of the uterus, with the following history: The patient had been examined by Dr. Chadwick some time ago, and he had found a tumor as large as a hen's egg. She had some little menorrhagia. Some five or six months after she came again, saying that her menstruation had ceased. It proved that she was pregnant. She went on to full term, and was confined December 8th. At the beginning of labor the tumor was projecting into the pelvis. Having dilated the os, Dr. Chadwick succeeded in getting his hand into the uterus, and delivered the child by turning. The tumor rose above the brim. On the eighth day after confinement had a severe chill. Dr. Chadwick was called to see her two or three days after this, and found the os occupied by a tumor, the lower end of which was as large as a child's head. The tumor rose up into the abdominal cavity above the umbilicus. There was no tenderness. Nothing to indicate an inflammatory process then. Pulse and temperature were very high; temperature 104.5° to 105° F.

The cause of death, or the main cause, was blood-poisoning. The indication was to prevent infection. The uterus was washed out two or three times daily by means of an elastic catheter, with much benefit. Autopsy made by Dr. Gannett.

Adjourned.

◆

ANNUAL MEETING OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

January 3, 1882. The secretary took the chair, and the president, Wm. G. Wheeler, M. D., read the annual address prescribed by the constitution, announcing as his subject,

A BRIEF GLANCE AT SOME OF THE BORDER LINES IN THE GYNÆCIC MEDICINE AND SURGERY OF TO-DAY.

Certain older questions, remarked the speaker, are not yet set at rest; for example, Is torsion or the ligature the better means for arresting flow of blood? If the latter, from what source shall the ligature be obtained? Again, what is the best method of treating recent wounds? by wet or dry applications, by antiseptic measures, or otherwise? In connection with gynæcology these and like questions bring both especial interest and obscurity, since this is one of the latest born departments of practical medicine.

This exceptional doubt and obscurity, both, may be traced back through the ages to the times of Hippocrates, who declared that the uterus exerted a paramount power over every other organ of the human body. Others, again, held that it possessed a separate and individual life, and was wholly independent of the laws which governed other portions of the system. Thus Aretæus asserts the womb to be an animal within an animal, possessed of power to traverse every portion of the body, and to take possession of whatever sense it pleased. In a later, but still distant age, Sydenham, Cullen, and others observed, it is true, wonderfully well, giving intelligent emphasis to the influence which the uterus exerts over the entire organism of the female, but they were deprived of the brighter light which recent years have shed upon our department. Peculiar difficulties await him at the very threshold who would give his attention to gynæcology. Observe the size, complexity, and activity of the nerve centres which preside over the reproductive organs of woman. Note also certain peculiarities impressed upon woman herself, the quickness of her perceptions, rapidity of thought, brilliancy of imagination, etc. In an organization of such delicacy and complexity derangement and disease must always be more or less imminent.

"Reflex action," continued the speaker, "plays an important and varied part in the symptoms of most of the maladies of woman: for do we not observe predisposition to periodical headaches, delirium, insanity, and various perversions of the intellectual and moral powers so numerous and so remarkable that the most experienced physician, the most acute physiologist is unable to decide what is voluntary and what is involuntary, or where moral responsibility ceases and where insanity begins?" In the reproductive system we must place the point of departure of all that is peculiar to woman.

Why has gynæcology been so slow in asserting its prominent and appropriate place as an essential part of medical practice? The intrinsic obstacles would appear to be twofold; we encounter the natural instincts of the sex, moreover, we have to contend with the outcome of education, the influences of social life. Unwilling to complain of that from the recognition and acknowledgement of which she shrinks, disease too often makes serious headway before the resources of medicine are called in to stay its progress.

The dividing line between obstetrics and gynæcology is one both of interest and difficulty, but all know how often the perversions of the puerperal state contribute the varied accidents familiar to the practitioner of the latter department.

The advent of anæsthesia has done much to enlarge the domain of the gynæcic art. Prior to this "the peritoneal cavity remained the 'dark continent' upon our surgical atlas." Hereupon the author gave a rapid glance at the rapid progress of surgery in general since the times of its emancipation from the "unholy alliance" of the chirurgeon and the barber. Gynæcological surgery has already done something to pay the debt it owes to general surgery; as illustrative of this, note the improved methods for the restoration of the perinæum and Emmets' operation upon the lacerated cervix. Above all, we must recognize the benefits accruing from the successful culture of ovariotomy. We are not to forget our indebtedness to the past; we should not ignore or contemn the lesson it has to teach. If it has much of mingled light and shadow, if the element of superstition is prominent, neither can we assert fixedness and certainty of the medicine of to-day; we have too frequent testimony to its error and vacillation.

The speaker emphatically protested in behalf of himself and of the Fellows of the Society against "all hobbyism or the arrogant assumption of a narrow specialism." Both our spirit and our work should show to the profession that the foundations of our department are as broad as are the sufferings of humanity. Moreover, the door to our special branch of medicine opens from the domain of general medicine, and we welcome to our ranks all honest workers, who, by predilection, incline to the department we chiefly cultivate, and who, qualified by liberal culture in collateral sciences, are willing to come in and coöperate with us in the effort to reach still higher attainments. The purpose of our corporate existence and our intention in coming together month after month is well expressed by Dr. Robert Barnes. He says: "The true function of a medical society is to gather together and then diffuse knowledge, to encourage independent inquiry, to survey from time to time, by the light of mutual reflection, the position attained, and thus to seek sound guidance in the application of our knowledge to the practical duties of the bedside."

The president closed his address with a brief survey of the work which the Society had accomplished through the past year, and the expression of his confidence in the future usefulness and success of the organization.

The Society then went into executive session, whereupon the usual annual reports were offered, and elections made of officers for the ensuing year.

Medical and Surgical Journal.

THURSDAY, AUGUST 24, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE NATIONAL BOARD OF HEALTH.

The National Board of Health has, to a certain extent, fallen a victim to the same influences which destroyed the State Board of Health in Massachusetts. In other words, the last Congress, of which few persons speak with unqualified respect, some of the members consciously and some unconsciously, has done just what our legislature did a few years ago. In spite of some mistakes which were to be more or less expected in a new and delicate, as well as difficult, work, the board possessed the confidence and support of nearly every sanitarian and sanitary organization in the country; and they wished for its continued existence with increased powers of usefulness, in spite of the evident necessity for some change in its organization and corresponding efficiency, such as experience might prove to be best, and for which they were willing to wait a reasonable length of time, but not indefinitely.

As was the case in Massachusetts, and also with Mr. Simon's splendid administration of the public health in England, the board had the good wishes of the medical profession and scientific men throughout the country. It was doing practical work of the greatest value; the civil and commercial interests of the whole region in danger from yellow fever quite depended upon it; the railroad and steamboat companies were heartily coöperating with it; and yet various influences, largely personal and political, were strong enough to deprive it of any appropriation for carrying on the extremely valuable scientific investigations which it has commenced. Moreover, the Assistant Secretary of the Treasury and the Supervising Surgeon-general of the Marine Hospital Service have received decisions from the President and from the Secretary of the Treasury, which will place the management of the epidemic fund for the control of contagious diseases in the hands of the Marine Hospital Service. At the same time, the sum of money placed at the disposal of the board for its current expenses is so small that much of its office work even must be given up.

Without doubt, all this has not been accomplished from pure considerations of the good of the public service alone, although that feeling influenced a certain number of persons who, without knowing much about the National Board of Health, think it too unwieldy to have control over quarantine, in coöperation with State and local boards, or to disburse the money required for that purpose. It must be acknowledged, that there has been for two years a growing dissatisfaction with the organization of the board. Some, too, believe the Marine Hospital Service, under one head directly responsible to the Secretary of the Treasury, competent to deal with epidemics through its hospitals and physicians always on duty at the chief ports of entry in the country; but even if the National Board of Health is not the proper disbursing agent of money to assist local authorities, there is still an abundance of other work for it to do which will more than justify its existence.

Much has been accomplished in these few years of the existence of a national health organization, far more than could have been reasonably expected; many lessons have been learned, and much valuable experience has been gained. Unfortunately the mass of the people is not yet educated up to the point of seeing the usefulness of scientific observation and practical work in sanitary affairs. The work inaugurated by the board cannot wholly stop; the fact seems clear that it cannot go on in the present way. It may go haltingly for a time and receive a temporary check. Some years may pass before the country appreciates its full importance and our civil service is established on a basis to secure the best results; but there can be no doubt of the position that a public health service will eventually take in all enlightened countries. In the mean time, it is not an encouraging thought that, in this respect, England, France, Germany, and even Japan are far in advance of the United States.

The members of the National Board of Health can afford to await the calm judgment of the sober-minded people of the country as to their work and its results. They have much to do still, however, to organize for the most efficient work. The detail of Dr. Billings to duty which the Surgeon-general thinks to be more important will, it is to be hoped, not deprive the board entirely of the services of its most valuable member.

Major Charles Smart, surgeon in the United States Army, has been detailed in his place. Dr. Smart was elected secretary of the board at its last meeting, August 15th, in place of Dr. Turner, who resigned that office. He is well known to the medical profession in connection with sanitary investigations. His executive ability, good sense, tact, judgment, and high professional standing render his appointment an eminently desirable one.

OPIUM IN CHINA. HOW MANY SMOKERS DOES THE DRUG SUPPLY?

With the desire of finding a tolerably accurate answer to the above question, the inspector-general of customs in China sent out three years ago a circular accompanied by a series of tables. These were sent to the commissioners of customs at about twenty ports along the coast and on the Yangtze River, by whom the blanks were to be filled and returned. These returns, from which an approximate answer to the question is derived, are just published in a special number of the Imperial Maritime Customs Reports.

The annual importation of foreign opium into China is said to amount to 100,000 chests, or 13,300,000 pounds, each chest containing 100 catties, and the catty being equal to $1\frac{1}{3}$ pounds avoirdupois. The raw drug loses about thirty per cent. of its weight when boiled down and converted into prepared opium. The retailers receive, therefore, about 9,310,000 pounds for distribution among consumers. This total amount of imported opium costs, the duties paid, £16,800,000, and the quantity consumed *per diem* £46,027. The average smoker consumes 3 mace or $\frac{6}{15}$ of an ounce avoirdupois daily, at a cost of about 22 cents; this amount suffices for from thirty to forty pipes. The total quantity of imported opium being divided by the total quantity each average smoker consumes daily, the conclusion each reached that there are in round numbers somewhat above 1,000,000 smokers of foreign opium in China.

The population of the country is spoken of as amounting to more than 400,000,000; the inspector-general estimates it at 300,000,000, and concludes that opium-smoking as supplied by foreign opium is practiced by one third of one per cent. of the population.

Reliable statistics concerning the total amount of native opium produced cannot be obtained. In the present report it is estimated as equal to the foreign importation, and it sells for half the price of the imported drug. The total amount spent by China for this indulgence is, therefore, according to these estimates, annually about £25,000,000, the total number of smokers 2,000,000, and the daily expenditure of individual smokers from 10 to 22 cents.

Inspector-general Hart says the Chinese who have studied the opium question are opposed to a traffic which more or less harms smokers, now numbering over 2,000,000; and annually increasing; at the same time they admit that opium provides a large revenue, that the expenditure for opium and liability to the incidence of opium taxation touch an infinitesimally small percentage of the population, and that neither the finances of the State, nor the wealth of its people, nor the growth of its population, can be specially damaged by an indulgence which draws so little from the pockets of those addicted to it, and which is partaken of by only two thirds of one per cent. of the population. They admit all this, but they do not find in either the revenue produced or the statistical demonstration of its percentage innocuousness any sufficient reason for welcoming the growth of the trade, or for desisting from the attempt to check the consumption of opium.

MEDICAL NOTES.

NEW YORK.

— The proprietor of the Hotel Bellevue, situated on the New Jersey coast some distance north of Long Branch, has won for himself a very unenviable notoriety by extorting the sum of five thousand dollars from the friends of two of the guests of the house who were suffering from typhoid fever, and pronounced by their medical attendants too ill to be moved. In consequence of the appearance of the fever in the hotel, most of the other inmates left, and the landlord demanded this modest sum from the families of the two patients, one of whom is a brother-in-law of Mr. Cyrus Field, Jr., for keeping the house open for a few days until it should be deemed safe to remove them. As it is a fact that these cases of typhoid originated in the building, and there can be little doubt that they are directly attributable to the bad sanitary condition of the latter, the friends of the patients will probably find little difficulty in obtaining legal redress for the outrage should they choose to bring a suit against the proprietor. It is stated that three other cases of typhoid have also originated in the same house during the present season.

— Two men who have been inmates of the Ward's Island Insane Asylum (the one for two years and the other for a longer period), and a third who was confined for four years in the Queen's County Insane Asylum at Mineola, Long Island, have just been released by order of court, after an examination establishing their sanity. Austin McNamara, the one who was at the Mineola Asylum, has signified his intention of bringing actions against all parties who were instrumental in obtaining his incarceration, as well as against the asylum authorities for cruel treatment during his residence there. He complains that the condition of the institution is wretched in every way; and the committee of the Queen's County Board of Supervisors are about to hold a special meeting, at Jamaica, for the purpose of investigating the charges against the superintendent and keepers of the asylum.

— The Philadelphia County Medical Society lectures for 1882–83 will be delivered by Prof. Austin Flint, Senior, of New York, who will discuss practical points connected with the physical diagnosis of visceral lesions.

— In 1861, when the yellow fever hospital was built at Seguin's Point, Westfield, Staten Island, the people of the town strongly opposed it, and there was a riot. The federal soldiers and the police on the island were called out to protect the building, but during the following winter the hospital was destroyed by an incendiary fire. The quarantine authorities have since buried yellow fever victims at Seguin's Point, and this, too, has caused much indignation among the people. Two or three have been already buried there this season, and the inhabitants threaten that if they fail to obtain redress from the legislature, they will again resort to force in their resistance to a continuance of the practice.

— During one week recently the milk inspectors of the Board of Health destroyed 3332 quarts of adulterated milk in different parts of the city. Just afterward a meeting of milk-dealers was held, at which complaint was made of the inaccuracy of the lactometer as a test, and a resolution was passed protesting against the "indiscriminate destruction" of their property, and asking that competent men be appointed to inspect milk, when in case it were found deficient, after due examination, a fair trial should be offered before conviction."

— One of the cadets at West Point has been confined to the hospital on the post for two or three weeks past on account of injuries which he received in a prize-fight in which he engaged with a fellow-student. In consequence of the "mill" both the principals and seconds have been sentenced to be confined within the color line of the summer camp during the remainder of the present camp, and also for the first month of the next annual encampment.

— During the past week the free baths of New York were used by 137,304 males, and 54,804 females, a total of 192,108 bathers.

Miscellany.

LETTER FROM LONDON.

THE JUBILEE MEETING OF THE BRITISH MEDICAL ASSOCIATION AT WORCESTER.

LONDON, *August* 12, 1882.

THE Jubilee Meeting of the British Medical Association terminated yesterday, after enjoying insurpassably fine weather for its reunion in the city of its birth, Worcester.

To-day a very large majority of the seven hundred and fifty members who visited Worcester are remaining to enjoy excursions and hospitalities which have been liberally provided in the picturesque neighborhood. An excursion to Stratford-on-Avon appears the most popular.

The sectional work of this year's meeting has been conducted under the following eight heads: Medicine, surgery, obstetric medicine, public medicine, anatomy and physiology, pathology, ophthalmology, otology. Though the meeting began on Tuesday the arrangements were made so that but eight hours were allotted to sectional work, none of this taking place before Wednesday. Certain of the sections, indeed, did not meet at all for the two hours allowed them on Friday morning. It has resulted, therefore, that this Worcester meeting has witnessed certainly less work and probably, too, more play than characterized the gathering at Cambridge in 1880. Next year will find the Association gathered at Liverpool, when its members may be expected to have recovered from the demoralizing effects of the picnic trip in which they indulged in the Isle of Wight after the labors of last year's International Medical Congress. From the custom of the various sections meeting simultaneously, it is impossible for members to avail themselves as fully as they might desire of the opportunities offered in different sections, and it seems that it would be more profitable if, in future years, the time for sectional work were more extended, not by giving more time to particular sections, but by arranging for only one half of the sections to be simultaneously in session.

The attendance in the various sections has been fairly good this year, though my suggested arrangement would afford an opportunity for doubling such attendance. It must be obvious to every attentive observer of these annual gatherings that only a portion of the members attend with any intention of participating in the sectional meetings, while the aspirations of those who do so are greatly thwarted, and the general quality of the sectional work is seriously impaired by man's inability to be in two places at once. This has been strikingly exemplified in the recent work of the pathological, ophthalmological, and otological sections.

I hear that the discussion on the morbid anatomy and pathology of diabetes was particularly able, the elaborate and original contributions of Hughlings Jackson and Pavy deservedly attracting much talent to this section, with the result of depriving the ophthalmological section of many of those physicians who were expected to have enriched the discussion, opened by Mr. Nettleship, on the following subject: To what Extent do the Signs derived from the Examination of the Eye and its Appendages contribute to the localization of Central Nervous Diseases?

There was an unmixed expression of admiration and delight at the address on surgery, in the delivery of which Professor Stokes proved a medical orator, scarcely, if at all, second to Sir James Paget.

Necessarily much of the public speaking at this Jubilee Meeting had to do with the founder of the Association, Sir Charles Hastings. To the citizens of Worcester Sir Charles Hastings was more than a successful physician and a leader amongst his co-practitioners. To them he was the embodiment of the intellectual life of the city. To his energy and advice they owe the museum which now bears his name. The members of the local branch of the Association gave a luncheon to upwards of five hundred of their brethren visiting Worcester, and the occasion was utilized for the presentation to the corporation of a bust of the late Sir Charles Hastings.

The chairman said that the object of the meeting was twofold. The chief object was to do honor to the memory of the founder of the Association, Sir Charles Hastings. (Applause.) The second object was that the Worcestershire and Herefordshire Branch should have the pleasure of meeting as many friends as could possibly assemble in that large building. (Applause.) That being probably the largest assembly which would take place, he begged to wish them a hearty welcome to Worcestershire. (Applause.) He hoped they would drink with all their hearts, although in silence, to the memory of the most worthy founder of that large Association, Sir Charles Hastings. He would call upon Mr. George Hastings, son of the late Sir Charles Hastings, to give some memorial of his life. The son stated that Charles Hastings was a boy of great energy, a characteristic which he maintained through life. Like most boys of energy he was much more fond of out-door sports, such as hunting and shooting, than he was of his books; but from the earliest period of his life he manifested a leaning towards the pursuit of that profession which he afterwards adopted. There was nothing around him to lead him towards it. He was born and bred in a country rectory with the usual surroundings, having no single relative, and perhaps no intimate friend, who was a member of the medical profession; but even as a child, and still more as a boy, his great love was to nurse any one or anything that was sick and ill. It had been said by members of his family, and by one who was now living at the age of one hundred years in full possession of her faculties, — (applause), — that she would seldom find him without a sick chicken or some other creature that needed care. When he was a boy, at an age when most boys were still at school, he expressed a desire to begin to learn medicine; and he was allowed to place himself under the care of two medical practitioners living not far from his home. He showed such remarkable aptitude that in a few months they advised that he should be sent to London, to have the advantage of seeing the hospitals and hearing public lectures. When he was only just turned eighteen years of age, and was possessed of no medical titles of any kind, he was elected, by the majority of a single vote, to be house-surgeon of the county infirmary at Worcester. While there he commenced those experimental researches which laid the foundation of his fame. There was practicing at that time in Worcester a physician, who afterwards removed to London, Dr. Wilson Phillip, who was engaged in researches on the nature of circulation and the action of blood-vessels. Charles Hastings voluntarily undertook to assist Dr. Phillip in those researches. He then left for the University of Edinburgh. It was recorded of him that he was the first student of that great University, and probably the first student in the kingdom, who used the microscope for the purpose of physiological research. (Applause.) He was ridiculed for its use, but Charles Hastings was a man impregnable against ridicule, because he knew he was seeking the truth, and confident he was seeking it in the right way by experiment. Immediately after taking his degree of Doctor of Medicine he was offered by the Senate of the University the Professorship of Physiology. From his earliest years he was a naturalist, a man of science. He was probably the first to write upon the geology of Worcestershire. He was the early expounder of the remarkable geological features on the flanks of the Malvern Hills, the friend of Murchison and Sedgwick.

In the president's address the following allusions were made to the origin and originator of the British Medical Association: In July, 1832, the foundation-stone of their own Society was laid in the city of Worcester, by its distinguished and ever-to-be respected founder Charles Hastings, and his small, but devoted band of coadjutors.

No wonder, that to a mind like that of Hastings, fresh from the warm atmosphere of the Medical Society of Edinburgh, the cold stagnation of a provincial city was unbearable. He read papers, started journals and societies on a small scale; but it was not till 1832 that he received sufficient encouragement to venture upon the step which he proposed should result in placing the provincial practitioner in almost as good a position as his metropolitan brother. And what was the condition of the provincial practitioner at this time? With the exception of a few local physicians of the older stamp, solemn, scholarly, and formal, and here and there an apothecary of more than ordinary acuteness of observation, there existed one dead level of mediocrity, men without the ambition to compete with their metropolitan brethren, because the means of doing so was denied them. No sparks of genius emanated from their brains, because there was no mental friction to produce them. No doubt it was the inferior education of the general practitioner, that made literature distasteful to him, and scientific attainments rare; whilst the desire for improvement, which might casually arise, found no field for action. So he settled down into the mere copier of other men's prescriptions, and the collector of current nostrums for certain symptoms. Bundles of prescriptions were handed down from one practitioner to another along with the practice. Having no other idea but that disease was an entity, he set to work to drive it out of the system by the popular means of bleeding, purging, and sweating. If this were the intellectual status of the principal practitioner half a century ago, were his morals and social status of a higher grade? The top-boots and the red coat did duty for the stethoscope and the test-tube; whilst the lancet was thrust into the arm of the too willing patient as recklessly and ruthlessly as the spur and the whip had been applied to the sides of the animal which brought doctor and patient together. These were the palmy days of the provincial physician! Many times had he been figured, as, with solemn step and well-poised cane, he descended from his lumbering post-chaise at the door of some opulent patient. The arrival of this great man in some country town was quite an event, and the signal for all the blind, and halt, and lame to turn out literally for a touch of the great man's hand! Those who could pay pulled out their guineas; those who could not, might perhaps count upon getting a glance and a word from the "Great Doctor," as he was called, as he passed through the admiring crowd to his carriage, in the court-yard of the inn. For some years, after 1832, very little progress was made by the provincial profession. One of the results of the establishment of the Association, had been that the College of Physicians, before so exclusive, threw open its doors and its honors, about 1860, to all qualified applicants, the College of Surgeons having somewhat earlier given an impetus to enlarged studies by the establishment of its present fellowship examination.

The president concluded by urging the importance of strengthening the branches and of modifying the electoral system so as to infuse new blood into the senate of the Association. Great questions were coming on for solution. He trusted they might be solved in accordance with the motto of their Association laid down for all time by Charles Hastings and his associates. When that consummation should have come to pass, when self-interest and self-assertion should have given place to brotherly coöperation in well doing and to Christian charity, and courteous deference to one another, then, and only then, would the British Medical Association have fulfilled its mission.

The annual report of the Council of the Association showed that the receipts during the past year were £16,525. The Association now numbered 9563 members. Among those who had passed away during the year were — Sir Robert Christison, who was president in 1875, and Dr. Jenks, who was president in 1851. The question of homœopathy, unfortunately mooted in the address in medicine and in surgery at the annual meeting at Ryde, had occupied much time on the part of the Committee of Council. The idea arose in many minds that the views enunciated had in some way been put forward by the Committee of Council; and it was not until the president of the Council, Dr. Bristowe, and Mr. Hutchinson, had shown that this was not so, that the feeling was allayed. A memorial was presented from one branch demanding the expulsion of a member, on the ground of his public profession of homœopathy. To this measure the Committee of Council would not accede. So far as possible they had closed the door of entrance to a professing homœopath. Against perversion to homœopathy after admission they were at present powerless, except by the expulsion of the offender; and this, under present circumstances, they considered unadvisable; first, because they held that such a course would be beneath the dignity of the members of a great and avowedly liberal profession; and, secondly, because it would confer an amount of notoriety which was very undesirable upon those who were expelled.

Mr. Nelson Hardy proposed the adoption of the report, with the following addition: "That it be an instruction to the Committee of Council, that the avowal of the profession of homœopathy, or any other designation implying a special mode of treatment, shall, *ipso facto*, disqualify from membership of the British Medical Association."

This proposal was the signal for an exceedingly noisy and animated discussion, which showed the small sympathy felt by the Association for real and pretended homœopaths. The proposal of Mr. Hardy was ultimately lost by an overwhelming majority who evidently thought it was wiser to treat homœopaths as beneath contempt, rather than to bolster them up with the cheap dignity of martyrdom which could be conjured out of such a resolution as was defeated.

As in previous years this annual meeting was made the occasion for various subsidiary gatherings; thus, on Thursday morning some five hundred members of the Association availed themselves of a breakfast given by Mr. Bowly, a Nestor of the total abstinence advocates here. After breakfast Dr. Alfred Carpenter, and other advocates of total abstinence from alcohol, indulged in those intemperate speeches so characteristic of these well meaning advocates of temperance, who essay to believe that the righteousness of the cause they preach is an excuse for the total disregard of facts which characterizes their arguments.

Dr. Alfred Carpenter's remarks, taken literally, would mean that the great majority of the medical profession (namely, those who are in the habit of treating disease in persons who are not total abstainers) are totally ignorant of the various phases presented, and courses run by pulmonary, cardiac, renal, and hepatic disease in persons who never take alcohol. These intemperate total abstinence people were singularly ready to misquote and misrepresent the remarks of various able speakers in the different sections, as was well exemplified by one speaker in his so-called quotations from Dr. W. S. Playfair, who, in a most able manner, opened a discussion on the systematic treatment of aggravated hysteria and allied forms of neurasthenic disease.

Some two hundred members dined together on Thursday night, and this year saw carried out on a substantial scale the resolution, passed at Cambridge, that total abstainers should pay but two thirds of the price charged for the dinners to those who were "less advanced." The Irish Graduates' Dinner was celebrated on Wednesday night, without that uproarious joviality which rendered the same dinner notorious when held on the native land, during the Cork Meeting. This reminds me to mention that the Association will probably meet in 1884 at Belfast, where they will be able to witness the great prosperity and unsurpassed industries of a town in that distracted island, which is now being made the subject of speculative and enthusiastic legislation, while the priest-craft is uninterfered with, though so largely responsible for the misery and savagery of so many districts.

Yesterday witnessed a warm debate on the ardent question of the compulsory notification of diseases by medical men. The following motion was ultimately adopted by a large majority: —

> "That this meeting earnestly desires the compulsory notification of infectious diseases, but wishes to express an opinion that the compulsion to notify should be placed upon the householder, in his duty as a citizen, and not upon the doctor."

There were numerous complaints in at least one section regarding a scarcely creditable practice which could be "burked" by the adoption of a very simple rule. It would seem that some few persons are in the habit of announcing their intention to read papers (and, indeed, in some instances of supplying abstracts thereof for publication in the *Journal*) which they never furnish. Such persons appear satisfied with the cheap and dishonest publicity their name obtains by its announcement with the high-sounding title of some contribution which has no other existence than in their own crafty heads. I met one busy member of the Association who assured me that on three different occasions his entire arrangements had been put out to visit distant towns where a particular paper was announced to be read by an individual on an exceedingly debatable subject. The victim of this poor artifice suggested that its repetition would be avoided if no announcement were made of papers which were not in the hands of the secretary of the section, who would be authorized to read them in the event of the author being unavoidably absent.

The lord lieutenant of the county and the Countess Beauchamp gave a garden party to the Association at Madresfield Court, Great Malvern, yesterday afternoon, so those who accepted this hospitality enjoyed some of the most picturesque scenery to be found in this garden-like island.

The Industrial Exhibition, which is now open at Worcester, the Royal Porcelain Works and many endemic industries of the neighborhood, greatly enhanced the interest of this Jubilee Meeting, which has certainly passed off most satisfactorily; and I should not have made the foregoing adverse criticisms, except in the hope that the cause for them will be removed, and that there will cease to be those obstacles which now contribute to make these annual gatherings mere pleasure trips for the many and disappointing labor for the few.

THE SEWERAGE OF BRIGHTON, ENGLAND.

THE town of Brighton, England, resents a report made upon its system of sewerage by the *Lancet*, and shows itself unappreciative of a really friendly critic.

There seems to be no doubt at present that the intercepting sewer of Brighton is converted by the rising tide into a reservoir of sewage and waste water. As a result a sea-side resort especially favored by nature in its sanitary surroundings, and very convenient to London, offers its visitors an atmosphere neither sweet nor altogether wholesome.

This is not the first time the *Lancet* has done good work by procuring and publishing reports on subjects important to public health.

THE ADDRESS IN MEDICINE BEFORE THE BRITISH MEDICAL ASSOCIATION.

DR. WADE, physician to the General Hospital, Birmingham, who delivered the Address in Medicine at the recent Jubilee meeting of the British Medical Association at Worcester, recalled to the memory of his audience some of the actual facts of medicine as it existed when the Association was founded, and some others which have occurred since.

We give the concluding sentences of the address taken from advance sheets sent to the JOURNAL: —

In planning this address, it seemed to me that it might hold out better prospect of profit to deal with the impersonal past, and not at all with the personal present; but I should feel myself unfaithful to a great trust on a serious occasion, did I not infringe this resolution to the extent of one sentence. Dispassionate survey of present medical practice forces me to the conclusion that, on a very large scale, and in both chronic disorder and organic disease, the physiological basis of treatment is too often unduly subordinated to the restorative basis of treatment. . . .

The lessons I have been trying to enforce are no new ones; we can see, by looking back, that the doctrines they embody have underlain the actions of all the great practitioners of the past. I venture to think that they ought to be assimilated by all practitioners in the future. We are told, it is true, that a stage of observation is but the infancy of any science, from which, in its adolescence, it must be emancipated. We are told that observation has done all it can; that medicine has been too long dawdling in this infancy, and that all our efforts should be directed to elevating it from a stage of observation to the higher level of exactness. What if of late years great advances have been made good in this direction? What if the knowledge procured by more precise methods of investigation, by a more refined organic chemistry, by more penetrating microscopy, by a more diversified experimentation, promises in the future to assume proportions undreamt of in the past? Can we suppose, has anything yet been done to justify the hope, that in any near future we shall be able at once to repeat the experiment of the laboratory in the sick room, and certainly obtain the same result in the confused and complex conditions under which it has there to be performed? Such hope is idle, and worse, it is hostile to philosophy and fatal to progress. The greater our advances in the sciences of anatomy, physiology, and pathology, the more need that our powers of observation should be sharpened, refined, and sensitized; for, in the same proportion will new suggestions arise of modes in which this knowledge may be transmuted into means of influencing the processes of disease. In short, we shall be told more frequently in the future, that we are to modify our old usages, or to discard them altogether, and employ new methods. Is the history of medicine from this day to be reversed? Are we in future to be confident that no false prophets will arise; that we shall be safe in believing that all we are told is true? If not, how are we to refuse all the evil and to choose all the good? The authority of the teacher, as we have seen, is no infallible test, for the evil may come from an oracle well calculated to command our assent. We must, to a large extent, depend each one upon himself, his own observation, and his own private judgment; employing the best means and devices of science to insure accuracy of observation, and exercising our judgment with caution and modesty. To the few only is it given to extend the landmarks of science, or to reclaim the waste lands of ignorance. But to each one is given the power to cultivate and utilize those which have been reclaimed. To each one it is given to render the practice of medicine more rational, more common sense, because more truly scientific; to render more rare in the future such dark blots as we have regretfully recognized in the past.

◆

THE FRENCH ACADEMY OF MEDICINE'S AWARD OF A PRIZE TO DR. H. J. BIGELOW.

AMONG the prizes awarded by the French Academy of Medicine at its last annual meeting, one of 10,000 francs, which is only awarded every six years, was divided between Dr. H. J. Bigelow, of Boston, and M. Th. Auger, Dr. Bigelow receiving 6000 francs and M. Auger 4000 francs.

In this connection we may remind our readers of the Prix Riberi to be awarded by the Academy of Medicine of Turin in 1886. The amount of the prize is 20,000 francs, and it will be given for the best embryological researches throwing new light upon the anatomy, physiology, and pathology of man. The essay must be clearly written or printed in Italian, French, or Latin.

Will no one revenge the repeated rape of the Boylston Prize by invading other countries?

◆

THE SANITARY CONDITION OF NAHANT.

THE *Advertiser* of August 17th contains the following note concerning the very interesting article on Nahant in 1881, which appeared in this JOURNAL on August 3d, and was copied by the *Advertiser*: —

The reprinting of my paper on the Sanitary Aspect of Nahant (read before the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, May 27, 1882), which appeared in the *Boston Daily Advertiser* on August 5th, and since then elsewhere, has, I am informed, alarmed so many of the residents and visitors of the little peninsula that I must ask for space in which to give such additional information and facts as seem necessary. The paper was intended to explain to medical men the condition of the town in the *autumn of* 1881, and the remedies suggested. Many persons, however, have assumed, erroneously, that it represents the condition of things on August 5, 1882. I should be very sorry to have the impression become general that the condition of Nahant is *now* as represented by my paper written last April. The proposed new sewers are completed, in working order, and house connections made. The worst feature remaining is the dilatoriness of certain householders in cleaning or discontinuing their tainted drinking supplies, including ice and milk. Though by no means perfect, it is entirely safe to state that the sanitary condition of the town is to-day much better than it has been for years past, — a fact due largely to the townspeople, who have, with few exceptions, at all times coöperated most cordially with all constructive work.

ERNEST W. BOWDITCH.

BOSTON, *August* 14, 1882.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 12, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York	1,206,590	828	465	43.93	5.67	33.92	2.05	.60
Philadelphia	846,984	406	189	5.66	1.72	—	1.97	2.46
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	366	240	42.66	3.78	31.59	1.49	3.51
Boston	362,535	236	127	51.66	1.26	43.68	3.36	.42
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	210	105	34.78	1.41	16.45	6.58	5.17
Cincinnati	255,708	137	77	36.45	5.85	20.43	.73	2.19
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburgh	156,381	107	60	32.69	.93	15.88	5.50	5.50
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	67	43	26.46	—	23.52	—	1.47
Providence	104,857	68	34	48 51	—	44.10	—	—
New Haven	62,882	39	20	48.64	2.56	43.52	2.56	—
Charleston	49,999	39	12	—	—	—	—	—
Nashville	43,461	—	—	—	—	—	—	—
Lowell	59,485	30	14	43.33	—	39.99	3.33	—
Worcester	58,295	35	21	54.15	2.85	48.55	2.85	—
Cambridge	52,740	22	9	45.45	—	40.91	—	—
Fall River	49,006	53	33	54.59	—	54.59	—	—
Lawrence	39,178	30	18	66.66	—	63.29	—	3.33
Lynn	38,284	29	20	58.48	—	44.72	—	6.88
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	30	15	—	—	—	—	—
New Bedford	26,875	22	—	72.00	—	72.00	—	—
Somerville	24,985	10	4	—	—	—	—	—
Holyoke	21,851	21	12	47.60	—	38.08	—	4.76
Chelsea	21,785	14	10	14.28	—	—	7.14	7.14
Taunton	21,213	16	8	12.40	—	12.40	—	—
Gloucester	19,329	10	—	—	—	—	—	—
Haverhill	18,475	7	6	52.84	—	14.28	28.56	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	6	3	33.33	—	16.66	16.66	—
Newburyport	13,537	7	3	28.56	—	28.56	—	—
Fitchburg	12,405	6	3	—	—	—	—	—
Malden	12,017	2	0	50.00	—	50.00	—	—
Twenty-one Massachusetts towns	161,092	80	51	53.75	—	43.75	1.25	—

Deaths reported 2933 (no reports from Brooklyn, St. Louis, and New Orleans): 1602 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1091, consumption 282, lung diseases 84, diarrhœal diseases 810, diphtheria and croup 69, scarlet fever 33, whooping-cough 37, small-pox 21, malarial fever 20, measles 16, cerebro-spinal meningitis 16, puerperal fever seven, erysipelas seven, typhus fever one. From *whooping-cough*, New York 20, Pittsburgh four, Boston three, Chicago and Providence two each, Philadelphia, Baltimore, Cincinnati, New Haven, Holyoke, and Woburn one each. From *scarlet fever*, New York 11, Baltimore four, Chicago, Boston, and Cincinnati three each, Philadelphia and Lynn two each, Pittsburgh, Providence, Waltham, Chicopee, and Woburn one each. From *small-pox*, Cincinnati 10, Baltimore six, Chicago three, New York and Philadelphia one each. From *malarial fever*, New York 12, Baltimore six, Chicago and Cincinnati one each. From *measles*, New York six, Chicago four, Cincinnati three Baltimore two, Pittsburgh one. From *cerebro-spinal meningitis*, New York seven, Chicago four, Haverhill two, Boston, Worcester, Cambridge, Taunton, Brockton, and Plymouth one each. From *puerperal fever*, Boston three, Chicago two, Milwaukee, and North Adams one each. From *erysipelas*, New York three, Chicago two, Philadelphia one. From *typhus fever*, New York one.

Forty cases of small-pox were reported in Baltimore, Cincinnati, 31; typhoid fever 12, diphtheria 11, scarlet fever two, in Boston; scarlet fever 10, and diphtheria two, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,053,203 (population of the State 1,783,086), the total death-rate for the week was 33.34, against 30.73 and 32.02 for the previous two weeks.

For the week ending July 22d, in 173 German cities and towns, with an estimated population of 8,312,251, the death-rate was 31.1. Deaths reported 4977: under five 3072; consumption 462, diarrhœal diseases 452, lung diseases 367, diphtheria and croup 116, scarlet fever 96, whooping-cough 65, typhoid fever 56, measles and rötheln 47, puerperal fever 19, small-pox (Königsberg and Tilsit each one) two, typhus fever (Stolph and Düsseldorf each one) two. The death-rates ranged from 17.2 in Barmen to 46 in Breslau; Königsberg 44; Munich 32.8; Dresden 30; Berlin 42.1; Hamburg 26.4; Cologne 36.8; Frankfort a. M. 22.6; Metz 20.8.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending July 29th, the death-rate was 19.6. Deaths reported 3176: acute diseases of the respiratory organs (London) 183, diarrhœa 299, whooping-cough 107, scarlet fever 84, measles 83, fevers 46, small-pox (London two) four. The death-rates ranged from 13.2 in Cardiff to 28.9 in Sunderland; Bristol 16.1; Birmingham 17.4; Manchester 18.1; London 18.8; Sheffield 21.6; Leeds 22.1; Liverpool 23.7.

For the week ending July 29th, in the Swiss towns, population 494,390, there were 34 deaths from consumption, diarrhœal diseases 32, acute diseases of the respiratory organs eight, diphtheria and croup six, typhoid fever four, scarlet fever three, whooping-cough and puerperal fever each one. The death-rates were, at Geneva 17.5; Zurich 14.2; Basle 21.2; Berne 18.2.

The meteorological record for the week ending August 12th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	30.029	74	92	67	82	64	76	74	W	E	S	5	6	4	C	F	C	—	—
Mon., 7	29.846	78	88	71	82	58	82	74	SE	S	SW	12	8	9	F	F	O	—	—
Tues., 8	29.666	78	92	70	84	48	92	75	SW	S	SW	6	13	12	O	F	R	—	—
Wed., 9	29.717	79	89	68	86	44	71	67	SW	W	W	8	9	8	O	F	C	—	—
Thurs., 10	29.942	71	81	67	73	84	79	79	NW	E	SW	6	7	8	C	O	R	—	[2]
Fri., 11	30.045	72	82	63	68	30	58	52	W	W	W	7	12	5	C	C	C	—	—
Sat., 12	29.995	71	82	63	73	49	76	66	SW	SW	S	6	10	12	O	O	C	—	—
Means, the week.	29.891	74						70										5.05	.53

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

[2] Inappreciable.

DR. FRANCIS ATWOOD.

The death of Dr. Francis Atwood, of St. Paul, mentioned in our last issue, merits more than a passing notice in our columns, for, although his unusually successful career was made in Minnesota, his early associations and education entitle us to claim him as essentially a New Englander.

Dr. Atwood was born in Franklin, Mass., August 20, 1846, and there his mother still resides. He graduated from Exeter Academy in 1864, and from the Academic Department of Harvard University in 1869. He received the degree of M. D. from his Alma Mater in 1873, after serving acceptably as house-physician in the Boston City Hospital one year. While a student he was a member of the Boylston Medical Society, and served one year as its vice-president. In 1873 he became a member of the Massachusetts Medical Society. Before beginning practice he spent one year in Europe, devoting especial attention to the diseases of the eye and ear. Several Boston physicians (including two who had been his classmates in college and in the Medical School) were with Dr. Atwood in Vienna, and can never forget his zeal and intelligent interest shown in acquiring knowledge of his chosen profession. He also pursued his studies in Berlin, Paris, and London.

Returning to America, he soon established himself in St. Paul, and in 1876 was appointed professor of the Diseases of the Eye and Ear in the Minnesota College Hospital, and also oculist to St. Luke's Hospital.

The Transactions of the Minnesota Medical Society contain articles from his pen upon Ophthalmology and Otology, Glioma of Retina, Division of Ciliary and Optic Nerves, a Substitute for Enucleation, and other subjects connected with the eye.

He rapidly built up an extensive and valuable practice. He was recognized by the profession of the Northwest as a specialist in the foremost rank, and was most favorably known to the profession and to the laity on account of his purity of life, genial manners, and kindness to all, especially to the poor. He left hosts of friends who will deeply mourn his loss.

Dr. Atwood married, in 1876, Miss Colhoun, of St. Paul, who survives him. There are no living children.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 12, 1882, TO AUGUST 18, 1882.

Hartsuff, Albert, major and surgeon. Having reported at these headquarters, on the 3d instant, surrendering unexpired portion of his leave of absence, will proceed to Fort Union, New Mexico, and report to the commanding officer for duty. S. O. 153, Department of the Missouri, August 4, 1882.

Shufeldt, R. W., captain and assistant surgeon. The leave of absence granted him in S. O. 92, April 21, 1882, from A. G. O., is extended one month. S. O. 178, A. G. O., August 2, 1882.

Brown, J. M., major and surgeon. Assigned as attending surgeon, at headquarters Department of the South, in addition to his duties as post surgeon at Newport Barracks, Ky. S. O. 79, Department of the South, August 10, 1882.

Hubbard, V. B., major and surgeon. Now awaiting orders, to report in person to the commanding general, Department of the Missouri, for assignment to duty. S. O. 186, A. G. O., August 11, 1882.

Semig, B. G., captain and assistant surgeon. To be relieved from duty in Department of the Platte, and, on expiration of his leave of absence on surgeon's certificate of disability, granted him in S. O. 121, C. S., A. G. O., to report by letter to the surgeon-general. S. O. 186, C. S., A. G. O.

Wilcox, T. E., captain and assistant surgeon. To accompany troop F, First Cavalry, to Fort Walla Walla, and then repair to these headquarters for assignment to duty at Vancouver Barracks. S. O. 106, Department of the Columbia, July 31, 1882.

Taylor, M. E., captain and assistant surgeon. Relieved from duty at Jefferson Barracks, Mo., and to report by letter to the surgeon-general. S. O. 185, A. G. O., August 10, 1882. Granted leave of absence for four months. S. O. 188, C. S., A. G. O.

Powell, J. L., first lieutenant and assistant surgeon. Confirms telegraphic instructions of this date to allow the lieutenant-colonel, Tenth Cavalry, and troops G. and L. of that regiment, and Assistant Surgeon Powell, to continue, temporarily, and until further orders, at Fort Stockton, Texas. S. O. 84, Department of Texas, August 9, 1882.

McCreery, G., first lieutenant and assistant surgeon. Transferred from Fort Apache to Whipple Barracks A. T. S. O. 119, C. S., Department of Arizona.

Ebert, R., first lieutenant and assistant surgeon. Relieved from duty at Fort Walla Walla, W. T., to accompany troop E, First Cavalry, to Boise Barracks, and on arrival there relieve Assistant Surgeon Wilcox from duty at that post. S. O. 106, C. S., Department of Columbia.

Raymond, H. I., first lieutenant and assistant surgeon. Transferred from Whipple Barracks to Fort Apache, A. T. S. O. 119, Department of Arizona, August 3, 1882.

Egan, P. R., first lieutenant and assistant surgeon. Relieved from duty at David's Island, N. Y., and to report in person to the commanding general, Department of Arizona, for assignment to duty. S. O. 185, C. S., A. G. O.

Wakeman, William J., first lieutenant and assistant surgeon. Relieved from duty at Columbus Barracks, Ohio, and to report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 185, C. S., A. G. O.

Macauley, C. N. B., first lieutenant and assistant surgeon. Appointed assistant surgeon, to date from August 10, 1882.

Cherbonnier, A. V., captain and medical storekeeper. Upon expiration of his present sick leave of absence to report in person to Lieutenant-colonel E. Swift, assistant medical purveyor, New York City, for duty in the medical purveying depot in that city. S. O. 188, A. G. O., August 14, 1882.

Books and Pamphlets Received. — Mental Pathology and Therapeutics. By W. Griesinger, M. D. Translated from the German (Second Edition) by C. Lockhart Robertson, M. D., and James Rutherford, M. D. New York: William Wood & Co. 1882. Wood's Library of Standard Medical Authors.

Diseases of the Rectum and Anus. By Charles B. Kelsey, M. D. New York: William Wood & Co. 1882. Wood's Library of Standard Medical Authors.

Lectures.

CLINICAL LECTURE ON BRIGHT'S DISEASE.[1]

DELIVERED AT BELLEVUE HOSPITAL, NEW YORK.

BY AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine, and Clinical Medicine, in Bellevue Hospital Medical College.

GENTLEMEN, — In connection with the cases which I shall have the pleasure of showing you to-day I desire to make some general remarks on the subject of Bright's disease and its varieties. We may enter upon the study of Bright's disease from two different points, the anatomical and the clinical. In connection with the first we would carefully study what is known as the large white kidney, the fibroid or contracted kidney, and the waxy kidney, and finally the different varieties as they are liable to occur in combination; for you must not forget that two or more of these may be found in the same subject. From the clinical standpoint we may consider the symptoms: *first*, those pertaining to disease of the kidney in general, and, *secondly*, those characteristic of the special varieties. Of course, this is a very large subject, and I shall not attempt in a single lecture to give any exhaustive *résumé* of it; but I will, at all events, introduce two or three cases which will serve to illustrate some of the points of diagnosis to which I wish to direct your attention.

Now that our first patient is before us, I find that his condition has improved so greatly since I saw him a few days ago in the wards that I shall not be able to point out to you to-day some of the most characteristic appearances of his disease, which were at that time very strongly marked. And this, I may say in passing, occurs not infrequently in the experience of the clinical lecturer; for patients often improve so rapidly under the efficient treatment which they receive in the hospital that by the time that he is able to present them in public to the class some of the most prominent characteristics of the case may have almost entirely disappeared or else have become very greatly modified. A short time since this man had a well-defined dropsical face, the bulging under the eyes being especially marked, but all this has now quite disappeared. You observe, however, that he still has considerable pallor of the countenance; but even this is much less marked than it was. Passing now to the abdomen, we find the evidence of liquid in the peritonæum still, although this also has greatly diminished in quantity. On palpation we can readily get the distinct thrill or impulse which is diagnostic of fluid. The ascites has diminished to such an extent that we shall forego the operation of paracentesis, which I expected to have had done before you to-day, and which, on account of the inconvenience which he suffered from the presence of so much fluid, the patient was himself quite anxious for. In the lower extremities I can still get the pitting on pressure which is the physical criterion of œdema; but here, as in the other portions of the system, the condition is very much less marked than it was a few days since. Let us see if we find the same evidence of œdema over the sternum. Yes, I get a distinct indentation. The presence of this sign at this special point is a matter of considerable practical importance. In a patient like this, who has hydro-peritonæum (which is usually accompanied by more or less œdema of the lower extremities), we wish to find out whether the dropsy is a local one, or whether it is general. The pitting at the sternum shows conclusively that there is general anasarca. In the present instance there could have been no question of this a week ago, as the dropsy of the face was then so marked.

But now a few words more in regard to the condition of the abdomen here. Although the belly is much smaller than it was, you can see that it is still very materially enlarged, while the œdema of the face has entirely disappeared. This, again, suggests a practical point. When a patient has general anasarca, due either to renal or cardiac disease, the amount of liquid in the peritonæum corresponds with the quantity of serum diffused generally; but if the hydro-peritonæum is out of proportion to the dropsy of the rest of the body, there must be a local cause which makes the hydro-peritonæum more marked. In the present case, then, we have both a general and a local dropsy, and I think I shall probably not err if I say that the latter is due to cirrhosis of the liver.

General dropsy, as you know, is due to two great causes, disease of the heart and disease of the kidneys, or to both in conjunction. In the case of this patient, therefore, the question arises, Have we cardiac or renal trouble? In determining this we can judge to a great extent by the countenance and general appearance. You observe that there is no cyanotic discoloration of the face and no dyspnœa. There is, however, well-marked pallor; and the external appearances would consequently lead us to decide that it is probably the kidneys that are at fault. If there were sufficient cardiac trouble to give rise to general dropsy, there would unquestionably be considerable duskiness, if not well-marked cyanosis, about the countenance. But we need not depend on this test. When we make an examination of the heart we find that there is no evidence of disease there, and hence by exclusion we arrive at the kidneys as the seat of trouble. Going a step further, we investigate the condition of the urine, and we find in it the unmistakable and definite evidences of renal disease.

I will next recite to you from the house-physician's book the chief points in the history of this case. The man is thirty-five years of age, and a stone-cutter by occupation. About ten months ago he noticed that his penis was swollen, and a short time afterwards this swelling extended to the scrotum, lower extremities, and other parts of his body. He also suffered from headache and dimness of vision, and spots frequently floated before his eyes. Six or seven months ago his belly became very much swollen, and he had to give up work. He was admitted to the hospital four months ago, and it was found that his urine contained forty per cent. of albumen, and hyaline, granular, and fatty casts. The cardiac dullness was increased. Shortly after admission twenty ounces of clear serum were removed from the right side of the chest. (Hydrothorax, I may say here, is usually confined chiefly to one side.) Since he has been in the hospital his abdomen has been tapped a number of times, and the different quantities of serum removed have been 240 ounces, 218 ounces, 295 ounces, and 334 ounces respectively. The record goes on to state that the patient's sight is markedly affected, and that both eyes show white and hæmorrhagic spots upon the fundus.

From this history there is no question of the presence of Bright's disease. The next point which we have to decide is, which variety of the affection have we here to deal with? We ask first, has this man the waxy kidney? It might, perhaps, be supposed that as the dropsy of the abdomen is out of proportion to that of the rest of the body, the hydro-peritonæum is due to waxy liver; and that, since the liver is waxy, there is reason to infer that the kidneys are affected by the same form of degeneration. It is a fact, however, that we do not get much ascites with waxy liver. Again, it does not appear from the history of the case, or the patient's present condition, that the man has suffered from syphilis, disease of the bones, or other causes of waxy degeneration. Has he, then, the contracted or the large white kidney? In this case we have symptoms that point to both varieties. The large amount of albumen and the large amount of dropsy are both indications of the latter; so that if these symptoms existed alone we should say that it was a case of large white kidney. But we have here in addition distinct evidences of uræmia in the headache, the dimness of vision, and the changes in the appearance of the *fundus oculi*. It is, therefore, probable that both forms of disease are present in this patient. Sometimes with chronic contracted kidney we have occurring from time to time attacks of acute diffused nephritis, which give rise to large quantities of albumen in the urine.

---

[1] Specially reported for the JOURNAL.

The important points of diagnosis to remember are that early dropsy and a large amount of albumen in the urine point to the large white kidney, and that evidences of uræmia point to fibroid kidney. With the contracted kidney we may have no dropsy whatever, and the only indication of renal trouble be found in the uræmia present. In such cases there is a train of symptoms which belong to deficient excretion of urea. We have little or no albumen, but there are headache, derangement of vision, and disturbances of the digestive function. In the latter nausea, either with or without vomiting, is most significant, and the peculiarity of this nausea is that it is apt to occur in the morning or at other times when the stomach is empty. There is sometimes, in addition, looseness of the bowels. These are the minor signs of uræmia. The graver signs are coma, convulsions, inflammation of serous membranes, œdema of the lungs, œdema of the glottis, and a form of dyspnœa not dependent on any abnormal condition of the lungs, but originating, probably, in the nervous centres of respiration.

I will now call your attention to another patient. John S., a native of Ireland, forty-three years of age, and a hostler by occupation. He was admitted to the hospital a month ago, and the history which he gave of his case was as follows: For more than six months he was troubled with headaches, and felt quite weak. Let me pause for a moment at this point to say that there is a great deal of significance in this simple statement. It is not uncommon for patients to state that they cannot accomplish nearly as much as they formerly could, on account of a feeling of fatigue, and when a person in middle life tells you that he feels thus weak, and, in addition, that he has frequent headaches, it is always important that you should look into the condition of the kidneys. The record goes on to say that about two weeks before admission he began to have pains in the small of the back, and had to give up work. It is a common popular notion, I find, that pain in the back is connected with disease of the kidneys. Pain in this location is not, however, an important symptom in Bright's disease, and when it is present in this affection it is much more apt to be due to the condition of the muscles in connection with the general weakness of the system incident to it than directly attributable to the pathological changes taking place in the kidneys themselves. The large muscles of the back always have a great strain upon them, and whenever the system becomes reduced from any cause pain and weakness is exceedingly apt to be felt in them. But to go on with the history. One week later the face, abdomen, legs, and feet became very much swollen, but after another week this general swelling had disappeared. He complains that the urine sometimes gave him a burning sensation when he passed it. He feels nauseated at times, but has never vomited. The nausea of Bright's disease, I may remark, is very like that of pregnancy, and whenever a patient complains of nausea (and especially if this nausea is generally experienced on waking in the morning), it should at once excite a suspicion of Bright's disease in your mind. In this patient the symptom seems liable to be felt at almost any time, occurring later in the day, as well as early in the morning, and this is sometimes the case. He complains also of slight dyspnœa on going upstairs. When first taken sick he says that he used to see stars, but I do not regard this as of as much significance as mistiness of vision. His bowels are regular.

The patient certainly has no general dropsy now. Has he renal disease? When he was admitted the urine was found to be amber-colored, turbid, and acid in reaction; its specific gravity was 1018; it contained thirty per cent. of albumen, and he passed ninety ounces daily, or about double the normal quantity. Later he passed one hundred and thirty ounces, although the specific gravity remained as high as 1015, which is certainly unusual with such a large quantity of urine. This condition of affairs would naturally excite a suspicion of diabetes mellitus, but the house-physician informs me that the urine has been examined for sugar, and that none was found in it. I will digress here for a moment to speak of a patient who called to see me to-day on account of some neuralgic pains, from which he was suffering, and whom I recognized as a gentleman who had consulted me ten years ago, although I did not recall at first what the matter was with him at that time. When I questioned him in reference to his urine, he said that he had not noticed anything abnormal about it, but when I happened to come near his person I at once noticed in his breath the characteristic odor of diabetes mellitus. On looking into my books I ascertained that I had found sugar in his urine ten years ago. The man did not want to have diabetes, and so he endeavored to deceive me as well as himself in regard to his real condition. It is thus that patients sometimes try to conceal grave diseases which they have, while in other instances they would have us believe that they are suffering from affections which exist only in their own imaginations.

This large quantity of urine is itself a very suspicious circumstance. If an individual has polyuria (with no sugar in the urine), and at the same time gives distinct evidences of uræmia, you can at once make a diagnosis of chronic Bright's disease. Furthermore, if the specific gravity of the urine is low, you can say with considerable positiveness that the patient has fibroid or contracted kidney. The microscopic appearances of the urine are not given in the record of this case. I will now examine the patient's heart. If I find it enlarged, but without valvular lesion, it will afford another very strong point in favor of the existence of contracted kidney. If, however, the heart is not found to be enlarged it does not by any means follow that there is no such diseased condition. In secondary enlargement of the heart the left ventricle is the seat of the hypertrophy, and consequently there is an intensification of the aortic second sound. On making an examination I do not get this here, but it is often, as I said, an important confirmatory evidence of contracted kidney. The condition of the urine, of course, affords certain therapeutical indications. Not long since I saw in consultation a patient with Bright's disease, who was passing a large quantity of urine, and the attending physician actually told me, with a considerable degree of complacency, that he had succeeded in reducing it quite noticeably. To reduce the quantity of urine, I need hardly say, is the last thing that we should think of attempting in such cases, for this large amount of urine is in reality the safeguard of the patient.

Before closing I will present to you still another patient. The history of the case is rather imperfect, as the man is not only a foreigner (a German), who does not speak English, but seems to be decidedly lacking in intelligence. The only account that he gives of himself is that he became weak about a fortnight before he entered the hospital, which was only three days ago. His urine was then scanty and high-colored, and his bowels were constipated. His feet and abdomen were swollen, and he complained of cough and shortness of breath, but no headache. On examination it was found that there was fluid in the peritonæum and on both sides of the chest, the larger quantity being on the right side. The urine had a specific gravity of 1018, and contained fifteen per cent. of albumen and hyaline and fatty casts. During the first twenty-four hours he passed only six ounces of urine, during the second twenty-five ounces, and during the third thirty-three ounces. Yesterday he had chills, and the temperature went up to 103° F., but to-day the temperature is normal. The general dropsy and the condition of the urine are evidences of kidney disease, but I am not as yet prepared to say whether there is any additional trouble present or not. The patient states that he has emaciated, and this would suggest that he is also suffering from some malignant affection, as renal disease does not often produce this effect. As there has not been time or opportunity for a more thorough examination of the case, however, we will suspend our opinion in regard to it for the present. As the increase in the quantity of urine has been quite remarkable since he entered the hospital, it may be of interest to you to know that he has not been taking any direct diuretic remedy, but merely the tincture of the chloride of iron.

— Professor von Bergmann, of Würzburg (Bavaria), has been selected to fill the professorship recently vacated by Professor von Langenbeck. Von Bergmann is already known as a scientific surgeon. Among his most important works may be mentioned that on Head Injuries. He was formerly Professor in Dorpat; in 1875 he was called to Würzburg to succeed the late Dr. von Linhart.

Original Articles.

RELATION OF MOULD FUNGI TO DISEASE.

BY W. W. GANNETT, M. D.

Among the many sciences intimately connected with medicine, botany has always held an important place, as furnishing a large portion of the materia medica. In recent times this science has become still more closely allied to medicine, not so much because it has afforded new means of *curing* disease, but because of the discovery that important factors in the *causation* of disease are to be derived from the vegetable kingdom. This refers to the growth upon or within the body of certain of the lowest forms of vegetable life to the detriment of the individual.

It is a fact familiar to all that most plants, in contradistinction to animals, are able to build up complex compounds from the comparatively simple ones existing in the earth in which they grow, and in virtue of the presence of green matter in the leaf, the so-called chlorophyll, are enabled, under the action of light, to decompose the carbonic acid of the air, retaining the carbon and setting free the oxygen.

This property belongs *only* to plants having chlorophyll. Those having no chlorophyl cannot elaborate from the earth and air the necessary compounds for their maintenance and growth, but can only draw their nourishment from organic matter already formed. Thus they occupy the same relation to the organic world that animals do, in that they break up complex compounds, absorb oxygen, and give off carbonic acid. In other words, chlorophyl plants make fuel; plants without chlorophyl and animals burn fuel.

Among the plants without chlorophyl is the lowest order of the great class of the cryptogams; namely, the *fungi*. Of the fungi, two subdivisions are of interest in medicine; a lower one, representing the lowest of all vegetable life, the *bacteria*, a name at present familiar to all: and a higher variety, the *mould fungi*.

Of the very important division, grouped under the general name of bacteria, nothing will be said here, but attention will be paid only to the comparatively unimportant group, from a medical point of view, the mould fungi.

It is not proposed to enter here into full details of mould diseases, but simply to consider whether *at all*, and if so, in *what* cases, the mould fungi stand to disease in the relation of cause and effect.

Before considering the characteristics of mould fungi, a word or two is necessary in explaining the meaning of terms applied to plants which can live only at the expense of matter already formed. Such live either upon dead organic matter or upon living organic matter. On dead organic matter they cause the chemical changes grouped under the terms fermentation, decomposition, and putrefaction; processes which are constantly going on under our observation; they are then termed *saprophytes*.

On living matter they exist at the expense of the body in which they reside, and are then termed *parasites*. It is further quite obvious that a parasite may on the one hand exist without doing any harm to the host, beyond the small amount of nourishment withdrawn, or on the other hand that it may excite disease, either in virtue of its own presence or from some secretion from itself. Such parasites are termed *pathogenic*.

The universal existence of moulds is known to all. In damp places, on decaying fruit, on sweetmeats, bread, cheese, and various other articles, they are so familiar in producing the delicate white or green covering that no further description of their gross appearances is necessary.

That such moulds are saprophytes, that is, that they live on dead organic matter, requires no proof for its assertion. The important point is, are they parasites? Do they live upon other organisms at the expense of those organisms? further, do they multiply in those organisms, and by so doing cause disease, that is, are they pathogenic?

The answer to the first question, which is, are mould fungi parasites, depends simply on observation, whether or not they have been seen growing upon or within the human body. It is a fact that their presence has been observed in these situations.

A positive answer to the question whether they are pathogenic cannot be so readily given. For, given a disease and with it a parasite, one is by no means justified in assuming that the parasite and the disease stand to one another in the relation of cause and effect. The parasite may be simply an association. Hence parasitismus does not imply pathogenesis.

In order to determine beyond all doubt, whether in a given disease a parasite, and in the present consideration this mould fungus, is the causative agent, the following conditions must be fulfilled.

With a certain disease must always be associated the same fungus, and the fungus should have reached a development and numerical increase sufficient to account for the clinical symptoms.

The fungus when inoculated in another portion of the same individual or in another individual, or where this is impracticable, in one of the lower animals, should produce the disease in question. Of course failure of the inoculation in a lower animal ought not *necessarily* to be taken as proof of the non-pathogenic nature of the fungus experimented with, as the susceptibility of the animal may be less than is the case in man or be wholly wanting.

A few technical terms, which must of necessity be used in discussing a question like this, may be briefly explained. Aspergillus and penicillium denote two great families of mould fungi, distinguished from one another, in the main, by difference in their fructifying organs. The *mycelium* of the fungus corresponds in a general way to the roots of the more highly developed plant, and consists of a series of delicate, branching, glistening, for the most part homogeneous, fibres.

The *spore* is to the fungus, what the seed is to the higher plant, it is that part from which a new fungus can develop; like the seeds of other plants it is not readily destroyed, and like them retains its power of producing a new fungus long after the fungus on which it grew has perished. The spores develop either in special organs, on stems growing from the mycelium, or they may arise from the mycelium itself, by the process of division. In the latter case, the fibres forming the mycelium present a series of annular constrictions, at regular intervals, suggesting the appearance of a rosary. The spores, when completely formed, separate from the parent stem in the form of oval or round glistening bodies, so small that they can only be seen with a microscope.

Probably most mould fungi can produce spores in either or both the ways suggested; the variation being due to the influence of the surroundings.

Mould fungi, whether in the natural or artificially cultivated condition, grow best on acid substances. They require moisture and oxygen. Some varieties, like penicillium, grow better at the ordinary temperature, whereas aspergillus develops more quickly at a temperature corresponding to that of the human body. These factors are of importance in considering the possibility of the growth of moulds in the interior of the body. Nägeli, a well-known botanist of Munich, in his recent work on Lower Organisms, goes so far as to say that it is impossible for mould fungi to grow within the substance of organs, as there exists no free oxygen in these situations. This point will be again referred to.

For those diseases of man with which mould fungi are constantly associated, Virchow, many years ago, proposed the term, "*mycoses*." The mycoses which up to the present time have been observed, are, certain affections of the epidermoid structures, skin, hair, and nails; of the external canal of the ear; of the foot, endemic in parts of India; of the mouth, known as aphthæ. Further must be considered the growth of mould fungi in certain organs of the body, of which the lungs are the most frequent seat, and finally a disease discovered and described only recently in man, the so-called actinomycosis.

Of the diseases included in the above category those of the skin, hair, and nails are the most frequent, and their true nature has been the longest known. They are: Favus, producing the characteristic yellow crusts on the hairy scalp; Herpes tonsurans or ringworm, with its characteristic red rings on various parts of the body, and when affecting the beard, known as Sycosis parasitaria; Pityriasis versicolor, causing the peculiar brown appearance of the skin of the chest; and lastly, the affection of the nails first described by Meissner and Virchow, and termed by the latter Onychomycosis.

All of these diseases are characterized anatomically by the growth of a mould fungus either between the cells of the epidermis or in the shaft of the hair, or in both places combined. In the case of the nails, between the layers. The fungus is represented by a well-marked, branching mycelium, producing its spores by simple division and never by special organs of fructification. The fungus has in each case received a name, not, unfortunately, in accordance with its botanical characteristics, but simply an arbitrary one. The favus fungus is called Achorion Schönleinii, Schönlein having first discovered it; herpes tonsurans fungus, Trichophyton tonsurans; pityriasis versicolor, Microsporon furfur. These names, given about forty years ago, are still retained, simply because botanists have been unable to give them better ones. All attempts to classify these fungi, that is to place them in distinct species, have failed. Attempts at their artificial cultivation have either, on the one hand, given negative results, or on the other such varying results that an admixture of other fungi from the air during the process must be supposed. This at least is certain, that by artificial cultivation these fungi have never developed fructifying organs, by which means alone botanists can classify them.

Inoculation of the fungi has failed to produce a like disease, and on the other hand inoculation of various ordinary moulds upon intact or macerated skin has given negative results so far as producing one of these skin diseases. It is true that Hebra, by the latter means, was at times able to produce a disease resembling favus, and at another time herpes tonsurans, and occasionally a very imperfect form of both on the same individual; but these experiments lack confirmation.

A pathologist in Berlin, Grawitz, after numerous unsuccessful attempts in cultivating the fungi of the skin affections, thinks that he has in some cases been successful, and finds further that the specific fungus is one and the same for all, and considers it to be Oïdium lactis. But by inoculating Oïdium lactis he was never able to produce anything more than a few herpetic blisters. His conclusions have not been confirmed, and should be accepted with extreme caution.

That these affections in the natural condition show a tendency to contagion of a varying degree is undoubted. Favus, in spite of the luxuriant development of spores, has but little tendency, herpes tonsurans on the other hand a far greater proneness. Although the diseases cannot be induced artifically, nevertheless experience shows positively that, under conditions not understood, transmission from individual to individual is possible.

In *resumé* it may be said, that in association with a limited number of diseases of the skin a more or less luxuriant growth of mould fungi has invariably been found. As the growth of the fungus increases peripherally, the disease spreads. Destroy the fungus and the skin returns to its normal condition. Further, that although the crucial test of confirmation, inoculability, is wanting, yet this negative result is not wholly sufficient to exclude the idea that the fungus and the disease stand in the relation of cause and effect, for the reasons, that the method of inoculation may have been an improper one or that there may have been a want of susceptibility on the part of the individual inoculated. For it is a matter of experience that there exists a proneness in certain individuals to repeated attacks of these skin affections, and apparently an entire immunity in others in spite of exposure.

In the disease of the nails called by Virchow onychomycosis they become thickened, claw-like, of an opaque-yellow color and very friable. Associated with it is found a development of mycelium and spores between the lamellæ. The fungus has been regarded as identical with the favus fungus by some, and with the herpes fungus by others. But the same absence of positive knowledge exists in connection with this fungus as in those previously mentioned, and whatever has been said of those applies to this also.

Whether in the dermatomycoses in general the fungus can gain a footing and grow on a normal skin, or whether it requires some abnormal condition for it to flourish, is not known.

Related to these diseases is that affection of the external auditory canal known as Otomycosis. Instead, however, of the fungus being limited to the layers of the epidermis and consequently not apparent to the naked eye, it develops an abundant growth above the level of the skin lining the canal, often filling the canal with a luxuriant mould, which is readily recognized as such by the naked eye. Further, the mould develops fructifying organs; in this way its species can readily be made out and has been found in all the observed cases to be an aspergillus.

Associated with this growth is always an inflammation of the external meatus of a varying degree. Whether the fungus is the cause of the inflammation or simply a growth occurring secondarily on a seat made favorable for its development by a preëxisting inflammation is not known. Most aurists who have written upon the subject think the fungus the cause of the inflammation, though the reasons given are not convincing. Others have noticed a growth of fungus in cases where an inflammatory process had been observed to exist in the ear long before the fungus appeared.

There is as yet too little positive evidence to enable one to come to a conclusion as to the pathogenic or non-pathogenic character of the fungus in this disease.

Another disease which may be briefly mentioned in connection with the external portion of the body is one occurring in certain parts of India and known as Madura foot or Mycetoma. It is of a very chronic nature, and is characterized by the growth of numerous nodules in the tissues about the heel, which break externally, discharging a thin, discolored fluid, and in some cases peculiar black lumps. These black lumps present the characteristics of a mould fungus which has received the name of Chionyphe Carteri. Carter, who has written the best description of the disease, thinks that it is in all cases due to the growth of this fungus, which gains entrance to the tissues of the heel through some slight abrasion, extends deeper and deeper, with progressive destruction of the preëxisting tissues, together with the growth of the above-mentioned nodules, which in turn break down, and through the external opening the discharge occurs, as already stated.

The black fungus has not been observed in all cases even by Carter himself, but where this is absent there are to be seen peculiar, pale masses resembling fish-roe, which Carter considers to be a degenerated black fungus, but which numerous authorities, and among them no less a one than Ferdinand Cohn, state to be no fungus at all, though they all agree that the black masses are a fungus.

If the numerous reports of the English army surgeons, stationed in various parts of India, in reference to the presence or absence of the black fungus in this disease, are to be credited, then one is justified in saying that the association of the fungus is not sufficiently constant to lead one to the belief that the Madura foot is a fungous disease.

An affection of the cavity of the mouth, frequently observed in bottle-fed or weakly children, and occasionally in adults weakened by disease, is known as Thrush. It presents a series of snow-white patches upon a more or less inflamed mucous membrane, on the removal of which a loss of substance may or may not be observed. These patches are shown microscopically to be made up of desquamated epithelium and an abundant development of mycelium and spores. This fungus has received the name of Oïdium albicans, and probably belongs to the moulds.

According to Grawitz, who has cultivated artificially the thrush fungus, it is not oïdium albicans, but a fungus called Mycoderma vini, which is not a mould but a yeast fungus. Grawitz claims to have succeeded in producing genuine thrush in very young animals by feeding them with milk containing mycoderma vini. But this cannot be regarded as conclusive proof, for Grawitz fails to give satisfactory evidence that his cultures contained no other spores than those of mycoderma vini.

Thrush is usually regarded as a harmless disease, and an eminently localized one. But Zenker, a thoroughly trustworthy German observer, noticed in a case of thrush of the mouth small abscesses in the brain, in which were mycelium and spores similar to those found in the mouth. He is inclined to think that they represent a metastasis through embolism from the primary disease in the mouth. This observation, made twenty years ago, has not been confirmed by similar cases.

In regard to the relation of the thrush fungus to the disease, one can only say, as in the case of the otomycosis, that the fungus and the inflammatory process are associations. It is not proved, on the one hand, that the fungus is the cause, the inflammation the effect. Nor can one say, on the other hand, that the inflammation is primary, and that the fungus simply finds a favorable seat for its growth upon the dead products of the inflammation.

In reference to the growth of mould fungi within the body, apart from the disease actinomycosis, a few words only are necessary. They have been occasionally observed growing in the bronchi, and more frequently in cavities of the lung resulting from necrosis, and have received from Virchow the names of Broncho- and Pneumo-mycosis respectively.

The usual fungus is an aspergillus, more rarely a mucor. The mycelium grows in the necrotic tissue lining the cavity, and sends its fructifying organs out into the free cavity. It rarely reaches an extensive development, and is never found where there is any putrid necrotic process, but only in connection with bland processes. Apparently the putrid change, with its associated development of bacteria, prevents the growth of moulds.

But it must not be understood that in every case of cavity formation in the lung where there is no putrescence mould fungi grow; for in spite of such favorable conditions they are but rarely found; perhaps, as Recklinghausen once suggested, because there is too much secretion present to allow them to get a foothold.

That the development of mould fungi in the lung is ever anything more than an association with the necrotic processes, and not their cause, has never been claimed by competent observers. They are not, then, pathogenic when in this situation. In fact, it is very questionable whether they are even parasites, and one might suggest with great semblance to the truth that they are simply saprophytes, that is, that they exist on the dead organic matter in the lung and not at the expense of the living tissue.

Perhaps the most important affection to be considered in the category of the mould diseases, both from its fatality and from the fact that the causative agency of the fungus is better marked, is one which has been but recently described, the so-called actinomycosis, which is closely allied to, and probably identical with, a disease occurring in cattle.

Among the diseases of cattle is one characterized by the growth of one or more tumors from the alveoli or spongy portion of the jaw bone, usually the lower jaw, which, after a long period of time, may reach the size of a child's head, having in the mean time destroyed the bone. The tumor is of a soft consistency, on section shows a grayish-white, juicy surface, spongy structure, with at intervals small, yellowish points, resembling small abscesses. Microscopically the structure is that of a granulation tissue. These tumors had been known to veterinarians under the names of scrofula, or sarcoma, or osteo-sarcoma.

In 1877, Bollinger, a veterinarian in Munich, on examining nodules similar to those described, found that the small yellow masses already referred to were not fat, as had been supposed, but that they were made up for the most part of an abundant development of a fungus, of the nature of which he knew nothing. He further observed that this fungus was a constant association with all the tumors. The specimens of the fungus were referred to Harz, a botanist in Munich, who stated that it was unlike anything that he had seen before, but was inclined to regard it as a mould fungus. He suggested the name actinomyces for this, apparently, newly observed plant, *aktin*, *aktinos* being the Greek for *ray*, and was applied to the fungus because the arrangement of its spores was in characteristic clusters of a rosette form, radiating out from a central point, the spores themselves being of a pear shape, large, homogeneous, and glistening.

This fungus had been previously observed in connection with the same disease, though not in all cases, by Perroncito, of Turin, who did not publish his results till later; also by Hahn, who failed to follow further his discovery, and quite recently another Italian, Rivolta, of Pisa, claims that he discovered the fungus, and published his results several years before Bollinger. To Bollinger, however, belongs the credit of having shown the constant association in cattle of the fungus and the tumors in the jaw, also in similar tumors developed secondarily in other parts of the animal.

Johne, a veterinarian in Dresden, deserves the further credit of having proved, by successful experiments of inoculating the fungus in healthy cattle, and thereby producing similar growths, that the fungus and the disease stand to one another in the relation of cause and effect.

The first published cases observed in man were by James Israel, a physician in Berlin, in the year 1878.

A woman of thirty-six presented herself at the Jewish hospital in Berlin, with abscesses in various portions of the external surface of the body. These were opened at intervals, the contents of All being of the same character, namely, a thin, foul-smelling pus, in which floated peculiar sulphur-yellow bodies, about the size of barley grains, and of a cheesy consistency. These bodies were examined microscopically by Israel, and his description corresponds to that given above of the fungus in cattle. He considered them to be a fungus, but not being a sufficient botanist to classify them, referred the matter to Ferdinand Cohn, who occupies the first rank as a mycologist in Germany. The latter was unable, however, to give any opinion in regard to the pear-shaped spores. This first case of Israel's died in the course of a month, under symptoms of extreme marasmus with occasional chills. At the autopsy were found abscesses in the lungs, spleen, kidneys, liver, and intestine, all showing clumps of fungi like those already described.

A few months later Israel had the opportunity of observing two other cases, in a man of thirty-six and in a girl of nine. In each there was an abscess in the neck, beneath the jaw, in the neighborhood of carious teeth. The contents of the abscesses was a foul pus, with the characteristic sulphur-yellow bodies, the actinomyces clumps. These abscesses refilled and discharged yellow bodies, but finally healed under the use of carbolic acid injections.

Israel was inclined to regard his first case as a form of chronic pyæmia, due to the growth of this fungus, primarily in the lung, secondarily in the other organs mentioned. He made no attempts to inoculate the fungus on lower animals, nor was he aware, apparently, of the results of Bollinger's and Harz's work already published.

Shortly after this publication Ponfick, of Breslau, reported cases coinciding wholly with Israel's so far as the presence and appearances of the fungus were concerned, but differing from the former cases in that the most striking characteristic, in certain ones, was an extensive prevertebral abscess with partial destruction of the vertebræ, associated with the formation of nodules in other parts of the body, in the heart in one case.

Ponfick, who had already had the opportunity of observing actinomycosis in cattle, saw, or at least says that he saw, that the two diseases were similar, and that there existed an actinomycosis hominis as well as an actinomycosis bovis. He cultivated the fungus, and had positive results in inoculating the fungus in healthy cattle. To him probably belongs the credit of recognizing the identity of the diseases in man and cattle. Up to the present time seventeen cases have been observed in man, and from these the following short *resumé* may be made: —

The disease occurs in two forms, in a local or external form, and in a general or internal form.

In the localized form the first appearance is that of an infiltration in the neighborhood of the lower jaw externally. This very slowly assumes the form of a nodule, is circumscribed, rather dense, and scarcely, if at all, painful. After a considerable interval the nodule becomes softer, fluctuates, and is then usually opened by the surgeon. The contents is a purulent fluid containing the sulphur-yellow bodies, which are the fungus. The disease does not heal spontaneously as a result of the opening, but continues to discharge the fungus and pus, the cavity all the while enlarging. If, however, the cavity be injected repeatedly with a five per cent. solution of carbolic acid, it soon ceases to discharge the fungus, and rapidly heals. Such a result occurred in eight of the seventeen cases. In these eight cases carious teeth were present, and in at least three cases the abscess was directly connected with the bone.

In the generalized form of the disease one has to do with the development of the actinomycotic nodules in the interior of the body. Though the exact starting-point of the disease in such cases is doubtful, yet it is probable that in certain ones it is primary in the neighborhood of the jaw, extending by vessels or by gravitation to deeper tissues. Further, it is probable that in certain of the generalized cases the lungs are the starting-point, the fungus gaining entrance through the bronchi. Finally, in a third series, prevertebral abscesses with caries of the vertebræ have been the principal characteristics.

Secondary to these may be found nodules in the pleuræ, heart, spleen, kidneys, or subcutaneous tissues.

The first step is the formation of nodules of spongy connective tissue, the so-called granulation tumors, which later soften and either break externally or the softened products gravitate. By this means the process extends and a corresponding destruction of tissue occurs; the death of the individual resulting from marasmus.

Wherever there exist these nodules, the fungus is constantly found in association; wherever the fungus is present it is always surrounded by the new growth. The extension of the disease is dependent upon the extension of the fungus — and in animals inoculation of the fungus produces the disease.

With regard to the means of introduction of the fungus within the body all is theoretical. It is probably taken in with the air or food, and so long as it comes in contact with only healthy tissues can gain no further entrance. Probably an abnormal condition, like that of a carious tooth, or some abnormality of the tonsils or respiratory surfaces, affords an opportunity for the fungus to reach the deeper tissues, there to develop as stated. The disease has only been observed in herbivora and omnivora. In carnivora it has not only never been seen, but all attempts to inoculate it have failed. This fact has been used as an argument in favor of the idea that the fungus is taken in with vegetable food.

The disease actinomycosis fulfills the necessary requirements for enabling one to say that the fungus is its cause, and further that fungus is a specific one. Whether, however, the botanists will in the future continue to consider the actinomyces as a mould fungus, remains to be seen. At present, comparatively little is known of its botanical characteristics.

The question which will finally occupy attention is with reference to the results derived from the direct inoculation of the lower animals with various mould fungi. As already stated, Nägeli advanced the idea that it was impossible for mould fungi to grow within the tissues of the body, as they required free oxygen for their development. That this is an error will be shown by what follows.

In 1870 Professor Grohé and his pupil, Block, injected into the jugular vein of rabbits spores of the common moulds, penicillium and aspergillus. The animals soon showed evidence of severe illness, and died in from thirty to thirty-six hours. The lungs, heart, liver, kidneys, spleen, mucous membrane of the intestinal tract and muscles were found to be thickly studdied with white or yellowish-white nodules about the size of a pin's head, looking to the naked eye like tubercles. Microscopically each nodule was found to be made up of a development of mycelium, surrounded by cells in fatty-granular degeneration. When injections of spores were made in the carotids, similar nodules were found in the brain and eye. Thus it was shown that mould fungi could rapidly develop in the internal organs of the body, cause necrosis in their neighborhood, and death of the animal. Grohé termed this condition "acute general mycosis."

The positive results of Grohé's experiments excited great interest, partly because it had been thought that moulds were very harmless, partly on account of the universal prevalence of moulds and the possibility that after all they might be important factors in the causation of disease.

Many experimenters repeated Grohé's inoculations, but invariably without success, nor did Grohé himself attempt to carry out further his investigations.

Among the unsuccessful experimenters was Grawitz in Berlin. In thinking over the subject he came to the following conclusions: That inasmuch as moulds grow best on a solid substance of an acid reaction, and whereas in the blood there exist the opposite conditions, fluidity and alkalinity, therefore the failure of devolpment must be due to the sudden transition of the mould to a medium not suitable for its growth. He further thought that it might be possible by cultivation to gradually acclimatize the moulds, so that outside the body they would live in an alkaline, fluid substance like the blood. This he attempted with penicillium, and after twelve to twenty cultivations succeeded in getting a mould, which he considered to be penicillium, to grow luxuriantly in an alkaline fluid at a temperature similar to that of the body.

On inoculating rabbits with the spores of this acclimated mould, the animals died, presenting the same symptoms and anatomical appearances as did those of Grohé.

Grawitz then published it as a proven fact that penicillium, the most harmless and universal of moulds, might, by cultivation, be converted into the most virulent pathogenic organism.

Unfortunately for Grawitz's theory, he neglected two important precautions in his experiments. In the first place he did not take pains to keep the cultivations free from admixture with other mould fungi from the air, and in the second place he neglected to further cultivate, outside the body, the mycelium found in the organs of the animals, so as to bring the fungus to fructification and thus determine whether the final fungus was the same penicillium which he started with.

Grawitz's theory has been overthown by Koch's assistant, Gaffky, and by Professor Lichtheim, of Berne, who have shown: Firstly, that penicillium cultivated purely and inoculated is innocuous; secondly, that certain mould fungi, aspergillus fumigatus and flavescens, *without any acclimatization at all* are capable of killing animals when inoculated, in the same way, and with the same anatomical appearances, as Grawitz had thought could only follow the inoculation with acclimatized fungus. Further, that the mycelium taken from the organs of dead animals and cultivated, always produced the same aspergillus flavescens or fumigatus.

Lichtheim and Leber have demonstrated that penicillium grows best at the ordinary temperature of the air, whereas aspergillus grows better at the temperature of the body. These observations, taken in connection with the fact that Grawitz neglected to keep his cultures pure, furnish the probable explanation of Grawitz's results. He undoubtedly started with penicillium, but cultivating his successive generations at a temperature of nearly that of the body, the penicillium could not thrive. There being opportunity for the introduction of other fungi from the air, aspergillus for instance, which grows luxuriantly at this temperature, the latter fungus quickly crowded out the penicillium, and so Grawitz's final fungus was a different thing from that which he started with. Consequently his fatal results were not due to an acclimatized penicillium, but to a fungus which had crept in and which in itself was pathogenic.

Gaffky and Lichtheim have proved, it would appear from their reports, that two forms of aspergillus, at least, are *in their natural condition pathogenic*, certainly as far as some animals are concerned. Thus far, however, no disseminated aspergillus mycosis in man has been observed, though it is quite possible that if these fungi were given the same favorable conditions in the human circulation that they have had in animals, a like result might follow.

It may be further stated that Grawitz's results and theories on protective inoculation, derived from experimenting with mould fungi, have also been overthrown by another of Koch's assistants, Löffler.

As yet the experimental study of the moulds is in its infancy, but it is to be hoped before many years more light may be thrown upon their relation to disease.

In final conclusion it may be said, in regard to the relation of moulds in general to disease, that so far as the present knowledge goes there is but one disease in man, namely actinomycosis, which fulfills the scientific conditions necessary in order to state positively that the fungus and the disease are cause and effect.

In regard to the mould diseases of the skin it answers practically to say that the fungus is the cause; scientifically it cannot be said to be proved.

Too little is known of thrush, otomycosis, and Madura foot to allow of any opinion being expressed.

So far as other moulds found within the body are concerned, not only is there no ground for considering them pathogenic, but proof is even wanting that they are anything more than harmless saprophytes.

THE SURGICAL MECHANICS OF LOCAL JOINT EXTENSION.

BY CHARLES F. STILLMAN, M. S., M. D., OF NEW YORK.

LOCAL joint extension, or extension confined to one joint instead of involving an entire limb (as is done by the long splint, by the pulley and weight, or by Hutchinson's method), may be produced by three different forms of apparatus: (1.) *Fixed* extension. (2.) *Adjustable* extension. (3.) *Elastic* extension.

The extension is produced by taking a fixed point at the insertion of the muscles below the joint, and pushing upward against the contractile force of the muscles governing the joint until this is neutralized and the joint given true physiological *rest*, being thus relieved by the local extension from (1) the contractile force of the muscles which serve to press articular surfaces abnormally close together when excited by inflammation or otherwise, and from (2) superincumbent weight, — these two being the factors which mechanically we must relieve in order to give rest. The extension splint should be capable of exerting constant extension at all angles in the axis of the limb. This question of local extension I have discussed at greater length in the London *Medical Record*, October, 1880, and in the New York *Medical Record*, December 4, 1880, and it is to show the progress made in instruments for its production that this paper is prepared.

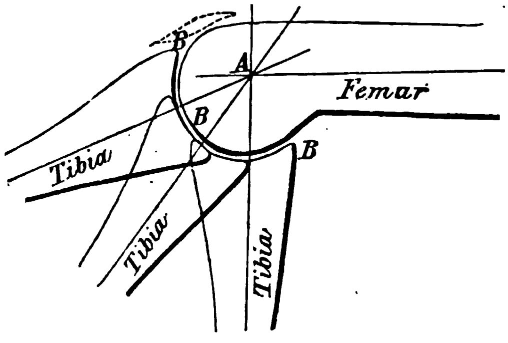


FIG. 1.

Taking the knee as an example, if a vertical section of the joint be made through one of the condyles, the leg being held at various degrees of flexion, and if axes be passed through the femur and tibia, it will be found that the latter intersect each other, and the axis of the femur at a point which is about the centre of the arc of the articulating condyle. (See Figure 1.)

This point, which I shall call the pivotal point of the knee, varies somewhat in position on the two sides according to the relative height and size of the two condyles. If a line be passed connecting the pivotal point of each condyle this line may properly be called the ginglymoid axis of the knee.

The action of a ginglymoid joint, to be physiologically and accurately copied in an instrument, should be constructed as shown in Figure 2. It is preferably made of thin steel, and is provided with suitable girths above and below the joint for proper attachment to the limb. The use of this false joint in its various modifications permits the limb to be fixed at any angle, or to have motion complete or limited, as is desired. For the knee one is placed upon each side, the pivot of each being placed at the termination of the hinge or ginglymoid axis of the knee, as already described. Two are used for the ankle in the same manner, one on each side; two for the hip, placed at right angles to each other, thus permitting both vertical and horizontal motion, and two for the spinal brace, with the same arrangement.

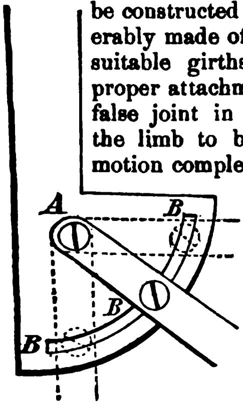


FIG. 2.

This joint embodies some of the essential features of the sector joint splint I presented to the American Medical Association,[1] but is more easily constructed and is lighter.

Extension, when associated with my false joint as described, may be either adjustable or elastic. The adjustable extension rachet may be of any of the forms commonly used, but preferably constructed of a slot bar and two clamps, as shown in Figure 3, or with a cogged bar and key, as in Figure 4.

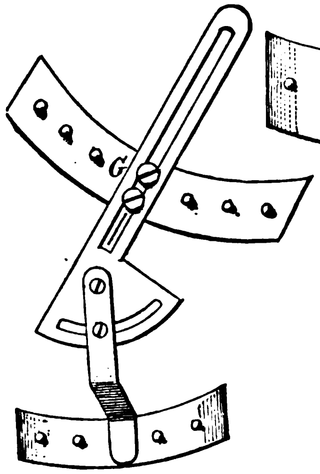


FIG. 3.

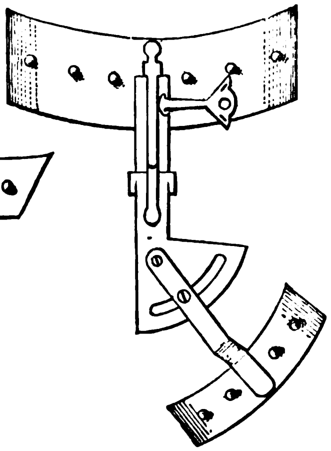


FIG. 4.

I prefer the former, however, as it is simpler in construction and quite as efficacious as the latter.

Complicated instruments should always be avoided in surgical mechanics when possible.

The elastic extension is secured by the addition of a powerful spring on the slot bar, the screws of which are allowed to remain loosened, as n Figures 5 and 6, or by the addition of a Y-shaped powerful elastic webbing strap (see Figure 7) working over a roller at the end of the slot bar, as in Figure 8. The extension may be increased or decreased by lengthening or shortening the elastic strap, and may be altered to an adjustable extension at any time by simply removing the elastic strap or the spring and fastening the screws in the slot bar, which remains the same as for adjustable extension alone.

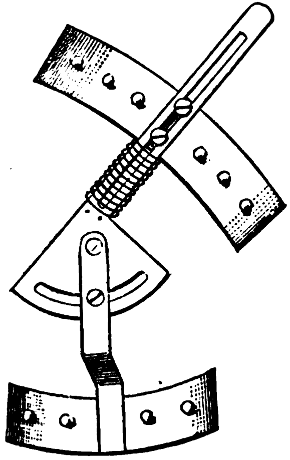


FIG. 5.

Constant elastic extension will be found of much service in the treatment of joints. In my article on Local Extension in the London *Medical Record*, October, 1880, and in the New York *Medical Record*, previously referred to, when enumerating the advantages of the sector joint splint, I asserted the following as the fifth point of advantage: "(5.) The production of *elastic extension*, with motion, by the addition of appropriate rubber cords. This alone opens up an entirely new and useful field, which will be treated of in a subsequent article, combining, etc."

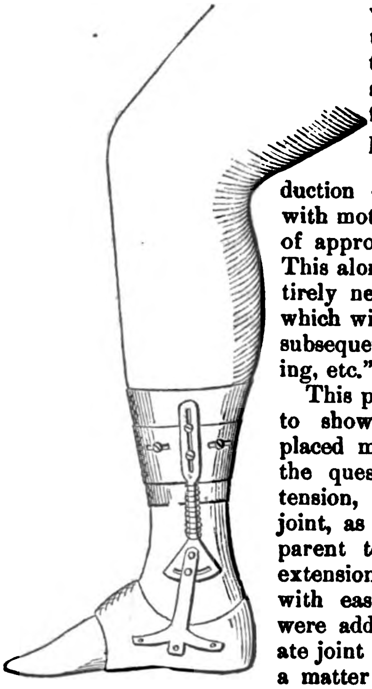


FIG. 6.

This paragraph is quoted to show that in 1880 I placed myself on record on the question of elastic extension, locally used for a joint, as it had become apparent to me that elastic extension could be obtained with ease if rubber cords were added to an appropriate joint splint, but I find as a matter of experience that

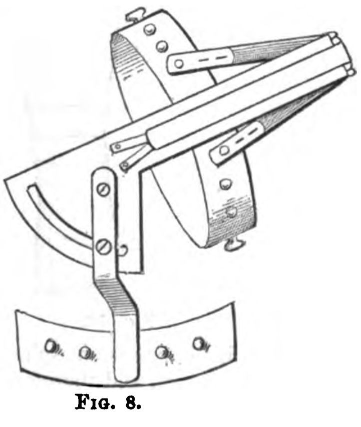


FIG. 8.

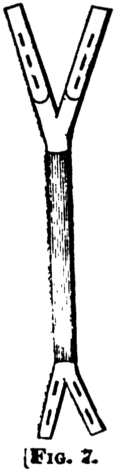


FIG. 7.

---

[1] See Transactions American Medical Association, 1880.

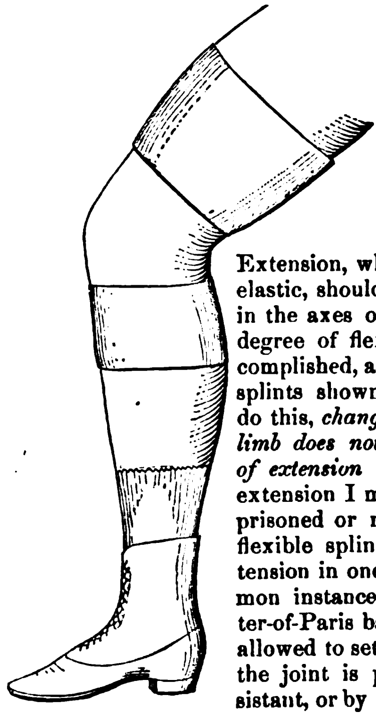


Fig. 9.

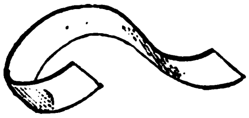


Fig. 10.

elastic extension can be best utilized by an apparatus which may be changed to adjustable extension at will, and in which the degree of force to be used may be regulated with great nicety. This the apparatus depicted in Figures 3, 4, 5, and 8 presents in addition to its other advantages. Extension, whether adjustable or elastic, should always be exerted in the axes of the limb at every degree of flexion. If this is accomplished, and by the use of the splints shown we are enabled to do this, *change of position of the limb does not change the amount of extension exerted.* By fixed extension I mean such as is imprisoned or made fast by an inflexible splint, which secures extension in one position. A common instance of this is the plaster-of-Paris bandage, applied and allowed to set, while extension of the joint is practiced by an assistant, or by a weight and pulley. Fixed extension, however, does not admit of change in the angle of the limb or of motion, so that its range of usefulness is extremely limited. In fact, an adjustable extension splint combines all the qualities of a fixed extension splint in addition to its own unique advantages, and therefore is in every way preferable.

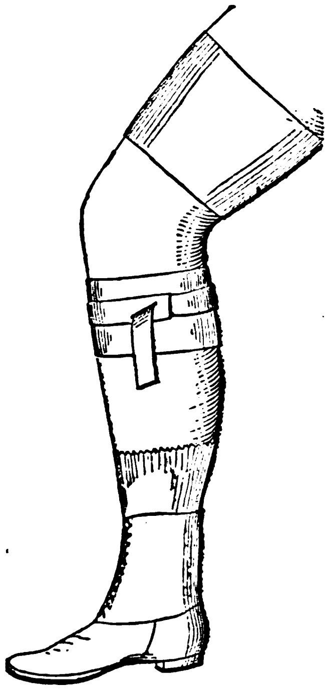


Fig. 11.

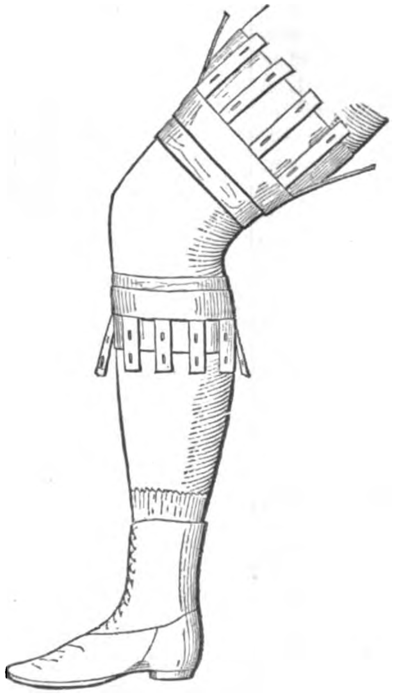


Fig. 12.

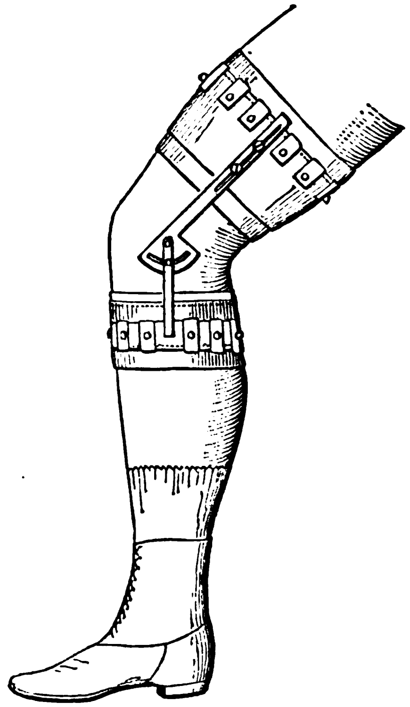


Fig. 13.

The *attachment* of local extension splints is a matter of supreme importance to their proper action, for it is necessary in every case to fix the lower girth so that it will not slip, in order to stretch the muscles by the extension bar of the apparatus and not cause œdema of the soft parts below. In order to do this effectually a few turns of plaster-of-Paris bandage (that made of *washed* crinoline is preferred) are passed *tightly* around the limb, just below and as close to the joint as possible, and allowed to *set.*

In this manner a solid, perfectly fitting segment of a cone is obtained. This should also be done above the joint (see Figure 9), and thus we obtain the segments of two inflexible cones whose smaller ends are placed toward each other, for the reception of the extension splint. The extension splints for ginglymoid joints are arranged so as to be divided into two parts, corresponding to the outside and inside of the limb, and the girth ends of which slide into each other, so that they can be removed, or made larger or smaller, with ease. These girths are provided with buttons at intervals around their circumference, to permit their attachment to the limb by adhesive strips (moleskin). Some fifteen or twenty of these, about an inch in width, are cut in lengths sufficient to more than encircle the limb above and below the joint, and these strips are slit diagonally near one end, as in Figure 10.

They are now each passed around the plaster-of-Paris foundations already described, each with one end drawn through its diagonal slit tightly over the plaster-of-Paris base, as in Figure 11. It will be seen that all traction on these strips which are to be placed around corresponding to the buttons on the girths, as in Figure 12, only serves to draw them tighter on the inflexible plaster which covers the soft parts. It now only remains to place the splint on the limb, taking care to place the pivotal points of the splint opposite the pivotal points of the condyles, and to button the adhesive strips on the girths, as shown in Figure 13, and any force then exerted by the extension bar, whether adjustable or elastic extension be used, cannot constrict or press injuriously upon the soft parts beneath, while the solid plaster-of-Paris foundation gives support to the muscles above the thigh, as well as serving to prevent the girth below the joint from slipping downward, the foundation being the segment of a cone with its base below.

I can recommend this method of attachment for local joint splints as being free from many of the objections appertaining to other plans; but these splints may be applied in any manner the surgeon may favor, and the essential principles of the splints may be connected with or inserted into any of the attachments of the splints in use at the present time.

In conclusion, I shall not in this paper depict the especial forms of apparatus for the various joints of the body. That will be done in subsequent articles which will appear from time to time either in this or other mediums of communication with the profession to which I am proud to belong.

Florence House, N. Y., *June* 1, 1882.

REPORT ON PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.[1]

BY FREDERICK I. KNIGHT, M. D.

ON THE QUESTION OF HYPERTROPHY OF THE OSSEOUS STRUCTURE OF THE TURBINATED BODIES, PRACTICALLY CONSIDERED.

Dr. D. Bryson Delavan, of New York, made an important communication under this title to the American Laryngological Association at its session in this city in June of this year.[2] The design of the communication was to show that the turbinated bones, contrary to generally accepted opinion, may, under proper conditions, undergo marked hypertrophy. Dr. Delavan says that the view that hypertrophy is confined to the mucous membrane and submucous layer which covers these structures must be admitted to be erroneous when due consideration is given, first, to the theoretical reasons which weigh against it, and, second, to the strong array of clinical evidence to which it is opposed. Theoretically the process of hypertrophy in general may occur in almost any tissue of the body. The turbinated bones are not formed until a late period in the development of the fœtus. This tardy appearance would imply considerable activity of development later in the history of the child, and it is not impossible to believe that in some cases there should occur an actual over-growth. Again, although the condition of hypertrophy is antithetical to that of atrophy, there is no part which, being susceptible to one, is not also susceptible to the other. Atrophy of the turbinated bones in the affection known as atrophic catarrh is commonly met with and universally conceded to exist; therefore, under conditions of nutrition opposite to those which characterize this disease, there should result the opposite condition of growth, namely, hypertrophy. The probability of this result is greatly increased when we recall the peculiarly intimate relation which exists between the mucous membrane of the turbinated body and the bone through the medium of the membrana mucosa, which not only forms a fibrous network for the support of the blood-vessels, etc., but actually passes into the periosteum, the characteristics of which it more nearly resembles. Any increase of the blood supply to the turbinated mucous membrane would be communicated without doubt to this periosteum in far more than the ordinary measure, and the nutrition of the bone proportionally increased. The conditions favorable to hypertrophy of the turbinated bone would seem to be (1), unusual space in the nasal fossæ; (2) long-continued hyperæmia of the structures investing the bone; (3) the existence of the above conditions during the period of the greatest constructive activity. Given a spacious nasal fossa, a turbinated body abnormally stimulated, a turbinated bone nourished by an excessive supply of blood, in a subject preferably rachitic, in whom the constructive processes are at their height, and there is no reason in theory why the bones themselves should not increase in size in equal ratio with the hypertrophy of the soft parts. In a vast majority of instances the conditions which would furnish these factors would be congenital, and they would be found (1) in cleft palate, (2) in deviation of the nasal septum. In complete cleft palate the inferior turbinated bodies, unlimited as to their expansion, and subject to constant irritation, frequently grow downward to such an extent that they form an almost effectual barrier to the nares against matters swallowed, and thus to some extent at least supply the place of the hard palate. In this general hypertrophy the bone shares.

Turning now from theoretical considerations to the practical demonstration of the main proposition, Dr. Delavan offers some anatomical and clinical evidence based upon direct observation. A large number of skulls in the museums of Washington, Philadelphia, and New York were subjected to examination, but in all of these collections excepting Hyrtl's, in possession of the College of Physicians, Philadelphia, the crania were derived from every source, and were in all stages of degeneration, so that the bony appendages of the nasal cavities were in most instances destroyed, and the specimens unfit for the purpose. Far different was it, however, in the case of the cabinet of Professor Hyrtl, which was intended to exhibit a typical representation of every nationality in Europe. Nearly every specimen is in an absolutely perfect state of preservation. In nearly every instance in which hypertrophy was observed it was confined to the middle turbinated bone of the wider nares, which singular predilection can only be explained on the ground that, as this turbinated body occupies the position directed towards the greatest concavity of the deflected septum, its opportunities for expansion during life are greater than those of its fellows.

The hypertrophy was, as a rule, symmetrical, extending throughout the whole antero-posterior course of the bone in about the same relative degree. It had about it nothing whatever of the nature of an exostosis, but the bony plates were of the same relative thickness as in the normal organs, the whole resembling a natural turbinated bone magnified in size. In some instances, however, they were notably thinner than normal, and the condition of general symmetrical hypertrophy was by no means constant, the enlargement seeming rather to follow the course of the deflected septum. Of the whole number of specimens, one hundred and forty, there was deflection of septum in eighteen. Of these eighteen there was hypertrophy of the middle turbinated bone in eleven, absence or atrophy of the middle turbinated bone in seven. It will thus be seen that in the above collection more than one half of all cases of deflection of the septum showed hypertrophy of the middle turbinated bone. *Exostosis of the septum* was not found in a single instance.

---

[1] Concluded from page 178.

[2] Archives of Laryngology, July 1, 1882.

Heretofore operative efforts for the relief of this form of nasal stenosis have been directed solely to the narrower nostril. From what has been proven in regard to the anatomical conditions in deviation of the septum, complicated with hypertrophy of the middle turbinated bone, Dr. Delavan feels justified in asserting that the rational and scientific plan of operation for its relief would be as follows: (1.) Removal of the obstructing middle turbinated bone of the wider nostril, allowing at the same time, if possible, a remnant of the organ to remain, sufficient for the performance of its normal physiological function; (2) straightening the deflected septum.

OZÆNA.

Dr. F. H. Bosworth in opening the discussion on this subject at the recent session of the American Laryngological Association said [1] that this name as indicating a disease should be abolished, as it was merely a symptom due to various morbid conditions, usually one of the following: (1) Syphilitic ulceration and necrosis; (2) scrofulous ulceration and necrosis, a rare disease; (3) the presence of foreign bodies; (4) disease of one of the accessory cavities; (5) the late stage of atrophy of the nasal mucous membrane, the rhinitis atrophica of the Germans.

In regard to the fifth class which in our experience furnishes the worst cases of fetid catarrh, Dr. Bosworth says there is seen on inspection a nasal cavity large and very roomy.

The turbinated bones, especially the lower, have almost disappeared, and the cavity is lined with grayish-green crusts adhering closely to the mucous membrane. If we thoroughly detach these crusts and clean the cavities we find that the odor is absolutely removed, and on inspection we find no necrosis, no ulceration, not even an erosion of the mucous membrane. There is nothing now remaining by which we can recognize the disease other than the roomy cavity and the shrunken turbinated bones. This is rhinitis atrophica.

Dr. Bosworth believes this to be a purely local affection, a catarrhal inflammation of the nasal membrane, atrophic from the commencement. The disease commences generally in early life, in an inflammation which is characterized by a desquamation of the epithelial lining of the acinous glands, which results in their destruction. The membrane is thus deprived of its normal supply of mucus; that which is secreted, being scanty, very soon dries from the surface of the membrane. There is thus formed a thin, dry pellicle which adheres closely and is removed with difficulty. Remaining thus it soon undergoes decomposition and gives rise to fetor. Moreover, the secretion beneath the pellicle is imprisoned, and a new source of fetor occurs. The imprisoned mucus soon becomes purulent. This reinfects the membrane, and the still further increase of pus is the result. The pellicle of inspissated mucopus which dries upon and adheres to the membrane, clinging about the convexity of the turbinated bones and contracting and drying, necessarily exercises pressure and obstructs the circulation. As the result of this the atrophy of membrane is still more encouraged. It has been said that this atrophic process is the next stage of the hypertrophic form of catarrh, and that the connective tissue formation has encroached upon the acini to their destruction. In microscopic examinations made by Dr. Bosworth, there was no evidence of any hyperplastic process. Dr. Bosworth recognizes no special cause of the disease. He does not believe that it depends on any special diathesis, and says that it occurs, as a rule, in patients enjoying perfect health.

For treatment of this atrophic form of the disease Dr. Bosworth recommends thorough cleansing of the parts with carbolized alkaline solutions, and afterwards some stimulating application, as the pulverized galangæ or pulverized sanguinariæ. In regard to the prognosis, the extent of atrophy of the turbinated bones is always an evidence as to the curability of the disease. If these have entirely disappeared all that can be hoped for is, that the patient shall be kept free from all unpleasant symptoms by the daily use of the douche.

THE COMPARATIVE VALUE OF ATOMIZED FLUIDS IN THE TREATMENT OF DISEASES OF THE LARYNX.

Dr. J. O. Roe has a seasonable paper on this subject.[2] He says the value of this method of reaching diseased surfaces of the otherwise inaccessible portion of the bronchial tract, when properly conducted, can scarcely be overestimated, but there is a portion of the respiratory tract, the larynx, which cannot by this method of treatment, except in the minority of cases, be sufficiently and properly medicated when invaded by disease requiring decided treatment. A large majority of diseases of the larynx are more or less localized. Even in that most common form of laryngeal disease, chronic laryngitis, it is quite common to find that the greater portion of the resultant thickening is more or less defined and limited to certain regions of the laryngeal mucous membrane. In other cases the disease will be found invading every portion of the laryngeal cavity. For the successful treatment of these diseases, if localized, the medicament should be applied only to the diseased surface, since the necessary strength of the agent employed would be entirely too great to be applied to the surrounding parts, which are but little or not at all diseased. If the disease is general, it is of the greatest importance that the remedial agent should be applied to every portion of the diseased surface, often into the sinuses of Morgagni as well as to the most prominent and projecting parts, and in sufficient strength to produce the desired effect. However well, theoretically, the spray may seem to be adapted to fulfill the latter indication, it will be found to be practically inefficient; and in the former cases it is contra-indicated, except for the application of cleansing and sedative solutions.

Dr. Roe questions the thoroughness of the application made by the laryngeal spray for two reasons: First. From its apparent want of thoroughness, as judged by observations with the laryngeal mirrors after the application has been made. Second. By its real effects, as evinced by the tardiness or almost lack of improvement in many cases so treated.

Experiments with salt and silver, and iodine and starch solutions, show conclusively that the particles of the spray only reach the portion on which they strike directly; and that the ventricles and other portions of the larynx which are shielded from the direct contact of the spray are, therefore, not medicated.

---

[1] Archives of Laryngology, July 1, 1882.

[2] Archives of Laryngology, April 1, 1882.

Dr. Roe has also found that in mild forms of general chronic laryngitis, after he had perseveringly used the spray in the most thorough manner possible, with little or no perceptible improvement, a few direct applications of the same remedy with the laryngeal brush, spong, or absorbent cotton, thoroughly into the ventricles and whole interior of the larynx, brought about a speedy improvement and cure.

Thus in the treatment of laryngeal diseases the probang (the various laryngeal brushes, sponge-holders, and cotton carriers being but modifications of it) is still an indispensable instrument, and cannot be superseded by the spray, not only when it is desired to apply a remedy to a limited portion alone, but when a general and thorough application to the whole interior of the larynx is necessary.

Hospital Practice and Clinical Memoranda.

MEDICAL HISTORY OF A CASE OF ABORTION, WITH A SYNOPSIS OF THE CRIMINAL TRIAL.

BY J. FOSTER BUSH, M. D., HARV.

I was called, October 5, 1881, to see M. C., aged twenty, a strong, healthy girl of Irish descent, who had always enjoyed good health till the present illness. I found her with rapid breathing; abdomen tympanitic and tender; high pulse and temperature; tongue brown and dry; there was an offensive discharge from the vagina, and, upon pressure, a milky fluid exuded from the breasts. She had experienced chills, but they had not recurred to any great extent.

The history obtained was as follows: She had passed two catamenial periods; the flowing, attended with expulsion of clots, had come on between the second and third months, and it was accompanied with pain. After three days the flowing stopped, but the pains increased in severity, and so continued till the time I saw her.

On October 6th she was constantly vomiting fluid of a dark greenish color; the temperature was 105° F., and the extremities were cold. Diagnosis: puerperal peritonitis. Dr. W. L. Richardson saw the case in consultation. In reply to questions, the patient stated that she had gone, on September 22d, to a Mrs. Fenno, living in Somerville, and had had an operation performed, for which she paid ten dollars. This not being successful, she repeated the visit on September 26th, when the operation was repeated at an expense of five dollars. The operation consisted of the application of a sponge on the outside of the stomach, and the passage of a tube within the vagina. The operation each time was very painful.

Subsequent to the use of these instruments an injection was given, and she drank a pint of hot spearmint tea. She was very sick on coming home the second time, and felt that she was dying.

On account of pain a subcutaneous injection of a quarter of a grain of sulphate of morphia was given. The patient died in the evening.

On October 7th an autopsy was made by Dr. F. W. Draper, medical examiner for Suffolk County, who kindly invited me to be present, and has permitted me to use the notes of the autopsy: —

"External examination: The body had been in ice. A quantity of dark-brown fluid escaped from the mouth when the body was turned. The breasts were full, and milky fluid could be pressed from the nipples. The belly was distended by gas. The external genitals were slightly swollen, and were of a darker color than in health. A little thin, fetid matter smeared the other parts. The remains of a ruptured hymen were distinct around the opening to the vagina. There were some superficial excoriations at the posterior and right lateral parts of the entrance to the vagina.

"Internal examination: The heart and lungs were healthy. The investing membrane of the intestines and other abdominal organs (peritonæum) was in a state of acute general inflammation; it was thickened, reddened, and opaque; its adjacent surfaces were agglutinated; its various depressions contained nearly a quart of extremely fetid, thin, greenish-colored pus.

"The interior of the spleen, kidneys, liver, and intestines presented no appearance of disease; their external covering shared in the general peritonitis.

"The stomach contained a quarter of a pint of thin, dark, fetid fluid. The internal structure of the organ was healthy.

"The uterus, bladder, vagina, and rectum were removed together. Their opposing surfaces within the cavity of the belly were quite firmly adherent by recent inflammatory products.

"The vagina was of normal size. Its color was a little darker than natural, and its upper part showed a patch near the mouth of the womb decidedly darker than the rest. There was a little dark colored, rather thick matter upon its lining membrane.

"The opening to the womb admitted the tip of the little finger. Around this opening were slight bruises extending one sixteenth of an inch outward from the margin. The womb was enlarged; its cavity measured three inches in depth from the external opening; its breadth was two inches; the wall of the womb was one inch thick at the thickest. One inch from the mouth of the womb, at the inner or upper end of the canal, were two excavated ulcerations, one anterior, the other posterior; their size was nearly equal, their diameter being about five sixteenths of an inch and their depth one eighth of an inch; their outline was circular, and their color nearly black; the muscular tissue under them was reddened to the depth of one sixteenth of an inch. On the inner surface of the anterior wall of the womb was a raised and reddened area of the size of a quarter dollar. The lining of the womb elsewhere was somewhat thickened, but was of nearly a natural appearance. The passages from the womb to the cavity of the abdomen (Fallopian tubes) were distended with thick pus, and their lining was reddened.

"The right ovary contained a corpus luteum of the size of a large pea."

The person mentioned in the declaration of the dying girl was arrested on the evening of October 6th. The officers found at her house a battery, which they did not disturb, but several electrodes were taken possession of, the character of which corresponded with those spoken of before, and were such as would have been likely to have been used in procuring an abortion by electricity. It is unnecessary to follow the legal proceedings in detail; suffice it to say that the trial justice and grand jury found a "bill" against the defendant, and the case came up for trial in the spring term of the Criminal Court for Middlesex County, at East Cambridge, before Chief Justice Brigham, but for sufficient cause was transferred to the June term, Judge Pitman presiding; Hon. W. B. Stevens for the government, and Hon. W. B. Gale and O. S. Knapp, Esq., for the defense. The dying declaration was ruled out as evidence.

[I would say that hours were spent in trying to find a justice of the peace, in order to take the girl's antemortem statement, but just as that officer reached the house the girl died.]

An outline of the general testimony for the government will be sufficient. It was shown that, on the evening first stated, the girl visited the house of the defendant with a male companion, who waited outside till she returned, the time being about half an hour. That, on the second visit, she was accompanied to within a short distance of the defendant's house by three companions, and was there for about half an hour; and that on the way home she seemed distressed, walked slowly, and appeared different from usual. The government then traced her movements, by numerous witnesses, from this time to the time of her death, thus showing the impossibility of her having had an abortion performed elsewhere. Various police officers who made the arrest and seized the instruments were put on the stand and related the events of the evening, and identified the instruments in court as the ones taken that night. The writer was the first medical witness. He testified as to the girl's illness, and to the fact of having been present at the autopsy. As an expert he gave his opinion that the girl died of peritonitis following abortion. That the ulcerations found at the mouth of the womb could only have been produced by direct violence, and that electricity would produce such effects.

Dr. W. L. Richardson testified as to having seen the girl in consultation, and agreed with Dr. Bush that puerperal peritonitis was the cause of death. As to the character of the ulcerations he could not say, as he had not seen them; but in his judgment the *constant* current would produce ulceration, but the *interrupted* current could not.

Dr. F. W. Draper read the notes of his autopsy. He also testified that the uterine ulcerations could only have been produced by some powerful stimulant. That the stimulant in this case was probably the galvanic current.

Dr. S. G. Webber was called by the government as an expert, and his testimony I will give more in detail. It was that the galvanic current could produce ulceration; that such ulceration would be found at the negative pole, and was caused by the decomposition of the parts; that the dark color was due to changes after the ulceration had been produced; and although ulceration of the parts spoken of could be produced by syphilis, caustics, etc., those described would correspond with those produced by the electric current; that the electro-magnetic current would be unlikely to cause ulceration, but he would not say that it was impossible; that the interrupted current was likely to produce uterine action and abortion.

This hypothetical question was then put to this witness: "Suppose that a young girl, nineteen or thereabouts, on a Tuesday night complained of pain in her back and stomach, and should die a week from the following Thursday from an abortion, when, in your opinion, was an operation, if any, performed?"

"Preceding Tuesday, within a few days."

This ended the government's side.

Dr. Hall, manufacturer of electrical instruments, testified, for the defense, that he had sold the defendant a galvano-faradic battery; that it would be impossible to cauterize any part of the human body unless a very powerful battery was used, or both poles were applied to the parts; that a battery with less than forty cells would not produce a slough; that with the battery he had sold the defendant he could with safety sit on a keg of gunpowder and pass a current through it.

The defendant testified that she was an electric physician, had been in practice over twenty-five years, and was in the habit of giving electric baths to women who menstruated irregularly, or whose catamenial periods had been stopped by a cold; that she never performed abortion.

The rest of the defense was an attempt to prove an alibi on the day of the last visit.

Closing arguments of counsel and the judge's charge are omitted. Verdict, guilty. Exceptions taken.

Recent Literature.

Lectures on Diseases of Children: A Handbook for Physicians and Students. By Dr. Edward Henoch, Director of the Clinic and Polyclinic of Children in the Royal Charité, and Professor in the University of Berlin. New York: William Wood and Company. 1882.

This work, which is a free translation of Professor Henoch's Lectures on Diseases of Children, published by Hirschwald in Berlin in 1881, forms a part of Wood's Library of Standard Medical Authors, and is an exceedingly valuable addition to the literature of this branch of medicine. Professor Henoch's idea appearing to be, not to cover the whole ground of diseases of children, but to merely reproduce his lectures on those subjects where he has had the greatest opportunity for personal observation; he necessarily omits much that is usually found in the text-books which already exist on this subject, thus avoiding the useless repetition with which this as well as most of the branches of the medical literature of the present day abounds.

The plan of the work is especially to be commended. It is a concise, lucid exposition of each subject, rich in new observations and original thoughts, taken from the author's wide experience of thirty-seven years, private and hospital practice. The text contains numerous typical illustrative cases, generally accompanied by a thorough description of the post-mortem appearances. It is in this latter respect that the translation, which on the whole is fairly done, fails to reach that degree of excellence which is attained in the original work; for quite a number of these illustrative cases are either entirely omitted or very much curtailed, so that from thirty to forty pages of the original text do not appear in the translation, a fact which would at once make the German edition of greater worth than the American, even if the former were not preëminent over the latter from its superior type and general appearance.

The part of the lectures which appears to be especially original is that which is devoted to the various nervous phenomena occurring in infants and children, a remarkably practical article on hysteria deserving particular attention.

The author still believes that fibrinous laryngitis is the highest development of acute catarrhal laryngitis, and that it need not necessarily be produced by the poison of diphtheria, or be one and the same disease as the laryngitis of diphtheria.

Interesting descriptions of cases of fibrinous and catarrhal pneumonia, and what the author designates as "Asthma Dyspepticum," add greatly to the value of that portion of the work where diseases of the respiratory organs are spoken of. The chapter on diseases of the circulatory organs is short and concise, and well illustrates how carefully the author avoids an error fallen into by most writers on children's diseases, namely, the repetition of those symptoms and rules for diagnosis, which apply equally well to the same disease in the adult.

The article on diseases of the uropoëtic organs is exceedingly well written and valuable, treating especially of the nephritis following scarlatina. The writer's large experience in this disease leads him to believe that scarlatinous dropsy does not occur unless there is also renal disease. He advises a milk diet and rest in bed while the albuminuria persists, and he gives exact rules for the treatment of the disease by acetate of potash and digitalis, and later by astringents.

Henoch does not give an unqualified approval of pilocarpine, as he has in some cases noticed alarming symptoms of cardiac depression following its use.

He is also rather doubtful as to the efficacy of the warm bath or wet pack, as they so often fail to produce perspiration in cases where there is œdema; on the other hand, in speaking of bleeding, he says: "I remember that in some of my earlier cases, especially in those complicated with inflammation of internal organs, this method, namely, venesection to the amount of a cupful of blood, produced surprising results as a diuretic; perhaps I should have saved many a child had I not been infected with the dread of venesection now prevalent. I acknowledge this openly, because I am resolved to employ it again, in suitable cases, and will not be deterred by the presence of œdema or dropsy of the various cavities."

The article on acute and chronic peritonitis should also receive especial mention, while the criticism which applies very generally to the books which have been written on diseases of children may here also be repeated, namely, that the description of the diseases of the skin is inadequate and often misleading.

Materia Medica and Therapeutics. Inorganic Substances. By Charles D. F. Phillips, M. D., Member of the Royal College of Surgeons, etc. Late Lecturer on Materia Medica and Therapeutics at the Westminster Hospital Medical School. Edited and adapted to the United States Pharmacopœia by Lawrence Johnson, A. M., M. D., Lecturer on Materia Medica and Botany, Medical Department of the University of New York. In two volumes. Vol. I. 298, Vol. II. 340, pages. William Wood & Co., New York. 1882.

This is a sequel to a treatise published some years ago on the Vegetable Kingdom, and forms one of Wood's Library of Medical Authors. The work differs from others on the same subject, chiefly in that an unusual amount of attention is devoted to the chemistry of the drugs, and the student who may be in search of any information relating to the chemistry of the various inorganic substances employed in medicine will find in this work a full exposition of what is known in this department.

Under the therapeutical action an account of the various diseases in which the drug has been used are given with a good deal of detail.

The article on water, both as regards its external and internal use, contains much that is not found in other works of this character; the same is true of the two articles following it on sea bathing and mineral waters, all additions to the usefulness of the work.

It would have been easy to classify the drugs more thoroughly on a chemical basis.

Besides the index for remedies there is also one for diseases.

THE EGYPTIAN EXPEDITION.

Preparations for the medical service of the campaign in Egypt have been unremittingly pushed on by the War Office authorities during the past week. The equipment of the field hospitals and bearer companies has been collected at the Woolwich Arsenal, under the superintendence of the brigade-surgeon in charge and the quartermaster of the Army Hospital Corps; the non-commissioned officers and men detailed for each hospital and company have been mobilized at Aldershot, so that as soon as the Admiralty provide transport the remaining seven field hospitals can embark at a few hours' notice. Between eight and nine hundred men of the Army Hospital Corps are required for the expedition, and of these six hundred have already joined the depot at Aldershot. The Peninsular and Oriental Company have placed the steamship Carthage at the disposal of Government, and she has been selected as the principal hospital ship. She has been fitted out to carry two hundred and twenty sick and convalescents, and when full will proceed to one of the general hospitals at Cyprus or Gozo to discharge her invalids and return to Egypt for a fresh installment. Brigade-Surgeon H. Fergusson has been selected for her medical charge, with a staff of medical officers, an officer of orderlies (Captain Joseph), and four nursing sisters. Every attention has been paid in fitting the hospital to the requirements of the sick; ice houses are provided; and she will be liberally supplied with medical and surgical stores. The Carthage sails on the 9th. The steamship Courland has been detailed by the Admiralty for an additional hospital ship, and will be fitted in a similar manner to the Carthage, though on a smaller scale. Deputy Surgeon-General J. Lamprey is under orders for Cyprus to supervise the medical arrangements of the island, which, as a base of operations, will have allotted to it a general hospital of four hundred beds.

The steamships Pelican and Marathon have been selected by the Admiralty to take out the 1st Bearer Company, and Nos. 2 and 3 Field Hospitals, leaving Portsmouth on the 5th. The principal medical officer, Surgeon-General Hanbury, C. B., and his staff, proceed in the Capella from Liverpool on the 6th. — *Lancet.*

Medical and Surgical Journal.

THURSDAY, AUGUST 31, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE OPERATION OF THE CONTAGIOUS DISEASES ACTS IN ENGLAND DURING 1881.

The report of the Assistant Commissioner of Police of London relating to the Contagious Diseases Acts in England has just been made public, and contains the facts concerning the operation of these Acts during the year 1881 as compared with previous years.

The average number of examinations of individual women made during the year in the several places subject to the Acts was 23.64; in 1880 it was 23.50. One thousand three hundred and fifty-nine women were registered for the first time during the year, many coming from the unprotected districts; the number of women remaining on the register at the end of the year was 83 less than in the preceding year, and a total decrease of 3056 has taken place since the Acts came into operation. In 5013 cases women signed the voluntary submission form; in 18 cases applications for orders were made for non-submission, but in only three cases was it found necessary to enforce them. In 86 cases proceedings were taken for neglecting to attend medical examination. It is stated that whenever a chance exists of reclaiming a woman every effort is made before she is brought under the Acts, and after she has signed the voluntary submission form the opportunity is still given her of returning to her friends if she is desirous of doing so. Seventy-four young girls between the ages of twelve and eighteen, 86 women between the ages of eighteen and thirty, and four above that age, who had been found in bad company and improper places, were rescued; 32 young persons between the ages of twelve and eighteen, 84 women between the ages of eighteen and thirty, and 13 above that age, who had commenced an immoral life abandoned it on being cautioned by the police, and consequently were not registered.

The number of brothels was reduced during the year by 44, being a decrease of 825 within the protected districts since the Acts were put into operation.

During the year 489 prostitutes are known to have come into the several districts from unprotected places; 322, 65.85 per cent. of these were found to be diseased on their first medical examination. One thousand seven hundred and forty-four common women were registered during the year, including those re-registered, many being from unprotected districts. Of this number 655, 38.46 per cent. of those examined (1703), were found to be diseased on their first medical examination, whilst 150 only, or 8.48 per cent. of those examined (1769) out of 1879 women remaining on the register on the 31st December, 1880, were found to be diseased.

During the year, 1,827 were removed from the register, of whom 863 left the districts under the protection of the Acts, 51 married, 234 entered homes, 659 were restored to friends, and 20 died.

In view of the present and prospective movements to secure legislation in regard to contagious or specific diseases in our own country, it is not amiss to follow from year to year the practical operation of the Contagious Diseases Acts in England, and we shall next week glance at the subject again in connection with the report from the Select Committee of the House of Commons appointed to inquire into the working of the Acts.

◆

THE SMOKE-TEST FOR DRAINS.

This test for defective waste-pipes is now being a good deal used by sanitary engineers in England and Scotland, and seems to work very satisfactorily.

In the last report of the Sanitary Inspector of Glasgow, a town in which some very good sanitary work has been done, the reporter says the inspectors there have to a great extent overcome the difficulty of dealing with structural defects attendant upon defectively jointed soil-pipes and drains in connection with sinks, wash-hand basins, and water-closets where such, as is frequently the case, are inaccessible from the stupidly persistent practice of laying them beyond convenient reach.

The smoke-test is applied by a small machine with powerful fanners, which blow the smoke of ignited cotton-waste, saturated with oil, into the whole drainage system of the tenement operated upon, by openings in the soil-pipes or otherwise, and which in due time issues at all imperfect joints and connections, disclosing their position with perfect accuracy. The operation, of course, is most satisfactory where all the pipes along their whole course from the house to the main sewer can be exposed, and it is well understood now that such inspection should be provided for when a house or building is plumbed.

The value of this test is indorsed also in a book entitled House Sanitation, quoted in the *Sanitary Engineer*. The author, Mr. Stanger, a civil engineer, mentioned as an example of the usefulness of the smoke-test an experience of his own whilst inspecting a large hospital, and says: —

"When making a first inspection at the Wolverhampton General Hospital, and testing with the smoke-test by forcing smoke up the drains with a small fan-blast, and thus finding out the untrapped inlets and leaky joints within the building, we discovered, among many other defects, smoke issuing from a pipe-casing in the corner of one room. On examination it was found that an inch overflow pipe from a disused cistern had been cut off by some plumber, anxious, perhaps, not to contaminate the water supply, and the end communicating with the sewer left perfectly open into the room. On re-testing to prove the work when the alterations were completed, one part of the basement was filled with smoke, and it was thus discovered that a temporary connection put in during the alterations had not been removed."

The smoke-test will localize defects where peppermint will not, and the presence of the smoke is neither so lasting nor so all-pervading.

◆

MEDICAL NOTES.

— In the proceedings of the Dublin Obstetrical Society, one of the speakers, after expressing his disagreement with certain German authorities on the matter of uterine displacements, and claiming that Dublin possesses greater advantages for gynæcic investigation than any German universities, Vienna and Berlin alone excepted, adds: "If we wish to go beyond this (that is, Dublin observation) we should go to the true fountain-head of modern gynæcology,— namely, the American school."

— During the past month three cases of amputation at the right hip-joint were performed in England, with the aid of Mr. Davy's lever for controlling hæmorrhage. A case where Mr. McLaren, of Carlisle, operated, lost two ounces of blood; a second patient, under Mr. Cowell's care, at the Westminster Hospital, lost three ounces; and the third case, where Mr. Paul Swain, of Plymouth, performed amputation with the assistance of Dr. Bampton, lost but one ounce and a half. All these patients are progressing favorably. — *British Medical Journal.*

— Notwithstanding the great exertions that have been made, and the precautions taken by the authorities, small-pox is spreading in Cape Town and its environs, five fresh cases having been reported on the 10th inst.; much alarm is felt in consequence. The disease has been clearly traced to the docks.

— The *British Medical Journal* quotes from a letter from Dr. Roswell Park from Prague: "I have had the pleasure of a rather extended interview with a patient whose larynx and epiglottis Professor Gussenbauer removed over a year ago. Six weeks after the operation he began to wear part of the artificial larynx, and, after accustoming himself to this, he gradually learned how to introduce and use the reed which takes the place of the vocal cords. This apparatus was made for him by Rothe, who has also done some work for the Reese Hospital. The patient is a riding teacher, is reputed the best rider in Prague, is busy from morning to night, talking all day, and suffers not the slightest inconvenience or pain. His voice is, of course, very monotonous, but his enunciation is excellent, his speech perfectly intelligible, and he eats and drinks with perfect facility. Three intralaryngeal operations had been previously made, before Gussenbauer attempted his feat. This case is said to be the best living example of what the art of the surgeon and the mechanician can accomplish for such a terrible disease as cancer of the larynx.

— Professor Alexander Russell Simpson, of Edinburgh, has recommended a uterine sound containing some modifications from that which bears the name of his uncle, the late Sir James Simpson. The most important change is a shortening of the stem, and a substitution of a short square handle, enabling the operator to apply one finger of the right hand against the cervix at the two and a half inch notch, while the handle rests firmly against the hypothenar eminence. The inventor claims that he can thereby combine a bimanual examination with a firm control over the uterus by means of the sound.

— The differences between the novelist's doctor and the doctor's doctor are usually sufficiently striking. But what shall we say of the homœopathic female novelist's female homœopathic doctor? To many of those who are reading "Doctor Zay" in *The Atlantic*, the "scientific" aspects of the story must be among its most entertaining features. Yorke, the hero, having "dislocated his ankle and concussed his brain," falls (possibly as a symptom of the latter injury) madly in love with his doctor. She, however, being already wedded to her art, and not being bigamously disposed, gives him no encouragement. But if the suitor gets only homœopathic doses of sentiment, he receives heroic ones of scientific information. The doctor's remarks always savor of the "shop," the character of the shop and the quality of its product being shown as follows. Speaking of his passion, the patient says: "'It is beyond the reach of any pellet in your little case; the remedy is not in your materia medica.' 'That may be true; but Nature has her own unerring prescriptions. A single dose of absence — even in the first attenuation — will work a recovery which will astonish yourself, sir.'" Again she says: "'I cannot demonstrate to you the futility of your hope. . . . Let us both consider this a case of aphonia and aphasia, and be done with it.' 'Explain yourself to the ignorant, my learned physician.' 'Aphonia is inability to speak'—'Oh, yes; my Greek might have stood me for that. And aphasia is inability to hear?' 'Precisely.' 'That is a scientific reply,' said Yorke, regarding her keenly."

NEW YORK.

— The managers of the New York Foundling Asylum, which occupies the entire block bounded by Lexington and Third Avenues, Sixty-eighth and Sixty-ninth Streets, have had in process of construction for some time past a new hospital building at the north-east corner of the block, which is now approaching completion, and will prove an important addition to the institution. It is seventy-five feet long and fifty feet in width, and in its external appearance closely resembles the St. Ann's Maternity Hospital, also belonging to the Foundling Asylum, which occupies the north-west corner of the block. The new hospital, which is built of Philadelphia brick, with light stone facings, will accommodate about one hundred patients, and will be arranged in such a manner that all cases of contagious diseases can be completely isolated. Its cost will be $75,000, and it will be used for all cases of sickness not provided for in the Maternity Hospital. The asylum now contains over six hundred infants, and there are connected with it about twelve hundred other children which have been placed in the care of outside nurses.

— The Hebrew Emigrant Aid Society has had constructed four substantial buildings of wood on Ward's Island for the accommodation of sick and destitute Russian refugees. They are long and low, covering an area of about two acres, and special attention has been paid to ventilation and sanitary requirements in their arrangement. From 1200 to 1500 emigrants can be cared for in them at a time.

— Dr. John S. Woodside, the Superintendent of the Brooklyn Hospital for Incurables, in his annual report to the Charity Commissioners of Kings County, calls attention to the overcrowded and unsafe condition of that institution. In the main building the space per patient in the sleeping rooms is only three hundred and fifty cubic feet, and the smallest number of persons in any one room is ten or twelve. In the new pavilion the sleeping rooms are all on the second floor, which is reached by only one staircase, and in case of fire there would be great liability to loss of life. There are at present three hundred and seventy-six patients in the institution.

— At Port Washington, Long Island, ten persons in one family are suffering from diphtheria, which is said to have been contracted by drinking from a tin dipper which had been used by a boy in a neighboring family who had the disease.

Miſcellany.

LETTER FROM KANE, PENNSYLVANIA.

MR. EDITOR, — Last summer I had the honor of inviting your attention to a new place of mountain resort, situated among the Alleghanies in the northwestern part of Pennsylvania; I believe that although already favorably known to a few physicians of Philadelphia and Cleaveland and some intervening places, the attention of the profession had not been pointedly directed to it previous to the publication of the communication referred to. This is owing principally to the fact that the settlement is comparatively a recent one. The Philadelphia and Erie Railroad was brought through this region about twenty-three years ago, subsequently a settlement grew up on what is known as the Big Level or Clarion Summit, which is the highest point attained by the road. This small village was named Kane in honor of General Kane, who has large land interests in this part of the country; it is by railroad calculation 2006 feet above tide-water. It is at this point, close to the railroad, that a hotel was built some years ago, but was not regularly opened under its present management until a considerable time afterward. It is not large, — having accommodation for only about one hundred guests, — but commodious, with high ceilings, large rooms, spacious halls, and a generous porch. Every room is well lighted and ventilated, and gives a prospect of unbroken primeval forest and mountains stretching away on every side to the hazy horizon. This house was named by its owner, General Kane, the "Thomson House," in honor of the late Mr. Thomson, the president of the Philadelphia and Erie road. The hotel is situated on an eminence overlooking the railroad, in the centre of an inclosure, which contains a park of about seven acres of woodland. Good board walks have been made among the trees so that pedestrianism may be cultivated, or the constitutional morning walk indulged in, and a bowling alley has also been provided, where more vigorous exercise may be pursued. While the porch and the park furnish ample facilities for delicate persons and children, for those who are stronger and desire more vigorous recreation, extended walks through the woods, and riding and driving, give opportunities for studying the wild scenery of a great lumber region, — viewing nature *en dishabille* as it were, — the mountainous declivities, the piled-up rocks, the gloomy, impenetrable forests, and smiling valley, in which the clear and cold trout streams are seen, form a beautiful panorama which surprises and delights the sober citizen whose experience previously had only been with cultivated lands and ornamented parks, nature adorned by art, — Pegasus yoked to the plow. The roads around this vicinity are in good condition, and comfortable for driving, being of hard dirt; they dry very soon after the showers, which are always on the bill in mountain resorts, although they are not of such constant occurrence here as in some other places.

As already intimated, there are numerous mountain streams in which the skilled fisherman may find the speckled beauties that he exhibits with such affected indifference after a long day's tramp in the woods. Contrary to experience in some other celebrated trout regions, there *is* an abundance of fish, and even tyros succeed in bringing in something to show for their day's tramp, while the more experienced generally return with a full creel. Gunning is also a favorite sport in the spring when the woods are filled with wild pigeons, or in the fall when the blackberries on the mountains attract numerous birds. The forest consists largely of hemlock, poplar, and beech, but wild cherry, red maple, and birch are sometimes seen. Strange as it may appear, there is no poison-ivy, and no venomous snakes to be found on this mountain top; and wild animals, with the exception of an occasional fox, or the ubiquitous porcupine or wild cat, are never seen, although in winter many deer are shot in this neighborhood; very rarely a bear is brought in by the hunters. The scarcity of flies and mosquitoes is a surprising and gratifying fact, which may be cited as an incidental advantage.

With regard to the water and the air, they are both pure and refreshing. An analysis of the mountain spring supplying the hotel shows it to be unusually free from saline material, and the permanganate test shows the entire absence of organic matter; it is soft, perfectly clear, tastes agreeably, and contains less mineral matter in solution than the Schuylkill water, which is usually considered a good potable water. The atmosphere is light and generally dry, furnishing most beautiful sunsets, and brilliant starlit nights. That it is invigorating and stimulating is shown by the improved nutrition and increase in bodily weight, which is generally noticed by visitors; from one to four pounds per week is commonly reported. One gentleman weighing one hundred and fifty-six pounds on coming here this summer, went home weighing one hundred and sixty-nine and a half pounds after a month's stay; if he had remained over for another train he probably would have assimilated another half pound and reached the even figure. This increase in weight is not confined to persons reduced by previous illness, but is universally remarked, and in children particularly; this is partly due to the open air life, the good table, and the pleasant character of the company. Contrary to an impression which seems quite general, there are no accommodations here thus far for very sick people, and invalids and valetudinarians constitute a very small proportion of the guests.

It is stated that a sanitarium or hospital will shortly be opened in this most favorable locality, through the liberality of General Kane, who has already placed in trust sufficient funds to endow such an institution; and he has even expressed the intention of devoting the present hotel structure to this purpose, should there be a demand for such extensive accommodations. It is believed, however, that a cottage hospital of thirty or forty beds, and private rooms, will answer for a foundation which may afterwards be extended as required. This neighborhood abounds in coal and oil, and, at this particular place, natural gas bubbles up in places along the road, and may be obtained in unlimited supply simply by boring a well almost anywhere. The facilities for lighting, warming, cooking, and obtaining power by steam, are very obvious where gas is plentiful and cheap; and indeed in the town of Sheffield, a few miles from here, it is used exclusively for such purposes, both for its private houses, and its large factories and saw mills. Bradford is similarly supplied with natural gas. There are also burning gas wells at Johnsonburg on the line of the railroad; the wonderful intermittent spouting gas well at Wilcox, I described in my former letter; it has now been burning some fourteen years. A sulphur spring also exists near here which might well be utilized for medical purposes.

Among the notable things in this region is the great Kinzua viaduct, at Howard Hill, on the New York, Lake Erie, and Western Extension, which is being built in order to open large coal fields owned by the company in this region. This, when completed, will be the highest bridge on trestle work in the world; it has already been described in the *Scientific American*, and most of the daily papers. It is 301 feet high, 2050 feet long, built entirely of iron (of which it will contain 4,000,000 lbs.), will be 20 feet wide inside the hand rail at the top, and will have a single track; the Phœnix Bridge Company have charge of its construction; it is expected to be ready for travel by the 1st of October. At this place the scenery, surrounding Howard Hill, especially near the bridge, is magnificent, and at a high point in the neighborhood, known as Mount Jewett, it is proposed to erect a large first-class hotel. The locality chosen is about 300 feet higher than Kane, from which it is distant about seventeen miles. Should the enterprise be carried out, of which there is little doubt, it will be one of the finest places of mountain resort in the country; of its success, the presence of the railroad (which is an extension from the great Erie road) will be a sufficient warrant. General Kane is now building a narrow gauge road to connect Kane and Mount Jewett, which will also form part of a system of narrow guage roads running on to Pittsburgh and St. Louis.

Having said so much about the locality and its surroundings it is about time to speak of the points of medical interest. One of the most important is that *victims of hay fever here enjoy perfect immunity.* This is a matter easily subject to demonstration. The writer has seen and conversed with several who visited Kane expressly for the purpose of escaping their annual affliction; and when this fact is more widely known, we may as reasonably expect large numbers of such sufferers to congregate here, as at Bethlehem in the White Mountains.

Catarrhal affections are rare, and rapidly improve after arrival; indeed, the air may be considered almost a specific for bronchitis and for catarrhal pneumonia in its early stages. Several patients who had suffered with influenza during last spring's epidemic, and who had some lingering chest trouble, have been here this summer, and returned home well. The gain in flesh and improved assimilative powers have already been referred to; this means better blood, healthier muscle, and reinvigorated nerves, in other words, a new lease of life for the tired brain-worker or worn-out man of business, who, closing his books, and laying aside his cares for a while, may here seek recreation and health. Where convalescence is slow from some acute disorder, this locality is a haven of refuge. Children, prostrated by heat or so-called summer complaints, rapidly recover in this tonic atmosphere; it must be admitted (as it is supported by experience) that children, especially the very young ones, are much more benefited by the mountains than the sea-shore, although this is not the place to consider their relative advantages. The pure and dry air is so constantly in motion that perspiration is rare except from unusual and violent exercise, while night sweats are almost unknown. The nights are pleasant and cool, and from personal experience the writer can state that not a single time has he found his pillow wet with perspiration on waking in the morning during the last six weeks, although this was the rule rather than the exception before leaving the city.

During the hottest weather in the cities, both East and West, the thermometer here rarely gets above 85° F. in the middle of the day, and even when at its highest point there is usually a breezy and shady side of the porch, or a walk may be taken into the cool, inviting shade of the woods around the house. While the daily papers brought accounts of death from sunstroke and the stifling heats in New York and Philadelphia, there has not been a day this summer when it has been uncomfortably warm, or on which it was necessary to change merino underclothing for gauze.

I stated in my former letter that this plateau or mountain top, covered as it is with miles of unbroken forest, has a great future as a health resort. The many evidences of progress, the increasing activity incident upon the development of the new oil region at Garfield, the great pressure of business on the old railroad, and the introduction of the line from New York, all speak of enterprise and thrift, and promise great things for the near future. Within a decade, Kane will probably be one of the most popular places of summer resort in the range of mountains belonging to the great Appalachian system, which already furnishes so many places of refuge from torrid heat in the cities of the Atlantic plain. F. W.

◆

CRITICISM OF DR. J. P. LYNDE'S PAPER ON INFANTILE MORTALITY.

MR. EDITOR, — The carefully written paper of Dr. Lynde, of Athol, read before the Massachusetts Medical Society at its annual meeting in June last, first printed in your JOURNAL,[1] and since then somewhat widely copied, deserves attention from all who have the medical care of children, in that it brings into notice remarkably good results with a somewhat unusual administration of milk.

---

[1] Boston Medical and Surgical Journal, July 20, 1882.

Out of nearly a hundred consecutive cases prematurely weaned, some of them in fact never nursed, there were only three deaths; one of which should not be counted, as it was fed from a sick cow, one because it did not come under observation till just before its death, and the other, the child of a sick mother, was sick from birth. So good results deserve study. These children were all fed on undiluted cow's milk, to which was added salt, and sometimes an alkaline bicarbonate.

Is it possible to reconcile these results with the commonly received opinion, that the milk should be diluted in the early months; and is it proper, for those of us who practice in cities, to follow the same course that has been so successful in the country?

Starting from the universally accepted fact that no food is better than the human milk, it seems rational to make a copy of it for artificial feeding, and although different analyses of the various milks vary, yet the casein and the solids of the cow's milk are always, I believe, in greater proportion than the casein and the solids of human milk. Hence the dilution. Clinically, dilution sometimes stops a child's diarrhœa. In this connection it is worth noting that some adults when well, and many when sick, cannot bear clear cow's milk, but digest it perfectly well when diluted with one quarter or one third lime water. Unfortunately I am not in possession of facts showing how far this is due to the alkali and how far to dilution. On the other hand, Dr. Lynde's cases are interesting, as showing that where the milk is too much diluted, a diarrhœa may follow that can be relieved by the use of a stronger milk. The same statement was made at a meeting of the Society for Medical Observation of this city a few years ago by a gentleman who had had large opportunities for studying children. That the different analyses of the different milks vary, would also lead to the conclusion that there can be no universal rule of dilution.

Dr. Lynde has probably reached the same end by changing his cow when there is too much casein. He states that he changed the cow if necessary. This course is not open to us of the cities, as the milk of the different respectable milkmen probably differs less than that of different cows, owing to its being mixed so as to give an average result. This is, I think, a distinction of great importance, but it is not the only distinction.

If it be true, as will probably be granted, that different babies differ in their capacity, as well as different cows in the quality of their milk, there will, I think, be found a broad difference between the children of farmers and country people accustomed to physical outdoor work, and the children of those city people whose work is mostly mental and in-doors. There is certainly a difference in the digesting capacity of the parents. Now these indoor mental workers form a large part of the better class of a city practice. To the poorer class different considerations apply.

With the *same* child we should expect a little poorer food to do better in the country than a little better food in the city during the summer, the time of diarrhœal diseases. The days may be equally hot, but the isolated wooden houses cool off at night much faster than the brick blocks surrounded by pavements, and there is probably a difference in the quality of the air owing to decomposition of organic matter. I learned from an undertaker that a dead body in the suburbs a few miles inland from Boston, keeps much better than in the city during the summer, but not in the winter.

Dr. Lynde's cases were in the best possible circumstances, in that being in the country, and children of people accustomed to open air exercise, he paid attention to all those little matters of detail, which, as well as the food, help to secure the result; and here is a difference, I am sure, between a New England country practice and one among the poorest class in the cities, where there is neither room, nor time, nor intelligence, to follow up these details.

I think we may fairly learn from the paper in question to take courage in strengthening the milk when, but *only* when, diluting it does not answer, and in applying the lesson we should never forget that other factors beside food enter into the problem, and we should also recognize that it may make a difference where we practice and on whom.

Edward M. Buckingham.

Boston, *August* 16, 1882.

ERGOTINE IN TYPHOID.

The treatment of typhoid fever by the subcutaneous injection of ergotine, as recommended by Dr. Duboné, continues to be noticed in *Le Journal de Médecine et Chirurgie*. The last case described is of a young woman, three to four months pregnant, in whom the treatment was begun on the eleventh day of the disease, when there was much tympanites, diarrhœa, bronchitis, and dyspnœa, and when continuous delirium had given place to semi-coma. The morning temperature was 104° F. Ten centigrammes of ergotine were injected daily for six days. The first injection was followed by a copious general papular eruption of the size of a millet seed. The temperature fell to 101.5° F., and did not again rise above 103° F. The other symptoms underwent corresponding amelioration, and the temperature became normal on the seventeenth day of the disease.

Four days after the discontinuance of the ergotine the patient aborted without any unfavorable symptoms. The fact that the abortion in this case took place so long after the omission of the ergotine, and the history of another case in which one and a half to two grammes of ergot were administered daily for two weeks to a pregnant woman without causing miscarriage, seem to confirm the harmlessness of this drug to persons who are pregnant.

THE NEW CITY HOSPITAL AT WORCESTER, MASSACHUSETTS.

Mr. Editor, — A stranger passing by the new City Hospital at Worcester would be sure to have his attention arrested by its handsome buildings, their pleasant surroundings, and favorable location. They stand in the middle of an oblong three-acre lot; on their right, or towards the east, is a beautiful lawn; on their left, or westwards, is a grove of tall trees, the cool shade of which is much enjoyed by convalescents in warm weather. The situation could not have been better chosen, even if it had been left to a committee of physicians. It is on high and dry ground, in an airy and healthful locality, three quarters of a mile nearly due west from City Hall, affording an extensive view of the city and surrounding country. A generous citizen of Worcester, descended from the Huguenots, George Jaques by name, gave this site for a hospital in 1872, and at his death, soon after, he bequeathed to the hospital nearly all of his property, valued at upwards of $200,000, the interest of which was to be, and is, used for its support.

The hospital was started in 1871, but it has never had suitable buildings until the present were erected in 1881. They were finished and ready for occupancy in December, 1881, and the patients were safely removed to them from the former hospital under the direction of the present careful superintendent and resident physician, Dr. Charles A. Peabody. The hospital consists of five buildings: the administration or main building, kitchen, two separate wards, and at a short distance from these buildings, but not connected with them, stands the laundry in a wooden building. The walls of the buildings are of brick laid in red mortar; their roofs are covered with slate; their interior is plainly finished with lath and plaster and natural wood; the doors and windows being of ash and the floors of hard pine, all presenting a very neat and clean appearance, both inside and out. The administration building faces the north, and fronts on Hospital Street. Parallel to the rear of this building runs the corridor (ten feet wide), which connects all parts of the hospital proper. Immediately behind the main building is the kitchen, and at a distance of thirty-five feet from each side of this, and also projecting southwards, are the wards, — one for males, the other for females. Hence, it will be seen that the wards have the sun all day long when it shines, and that they are protected on the north by the corridor.

To say that the main building covers a space of fifty-three feet by fifty feet, and is two stories high, does not by any means convey an adequate idea of it. It rests on a high foundation of brown sandstone; its steep roof, of irregular shape, is surmounted by a tower eighty feet high; its trimmings are of Ohio sandstone, which, on account of its yellowish gray color, forms a pleasing contrast with the walls and foundation; its entrance, fifteen feet from the street, is a stately porch supported by granite pillars, and is reached by a double flight of granite steps. Altogether, this building presents an imposing appearance, and for architectural beauty it may truly be said to be unsurpassed by that of any other hospital building in the United States. Entering this building from the front door, we find ourselves in a spacious hall which extends through its middle to the corridor; on our right are the reception room, trustees' room, and apothecary shop; on the left are the superintendent's offices, stairway, lavatory, and store-room for linen, all high studded. The operating room is spoken of as part of the main building, but perhaps it would be more correct to say that it adjoins this building, projecting eastwards from it in an oval form, and at its adjoining or western end, it opens into the etherizing room. The operating room is provided with a glass case of surgical instruments, and has all modern conveniences in the way of light, heat, ventilation, and drainage. The door for the reception of patients is on the south side of the corridor, nearly opposite the operating room. The rooms of the second story of the main building are occupied by the superintendent and family, whose comfort has not been forgotten in the construction of the hospital. The rooms pertaining to the wards — nurses' rooms, ward-kitchen, linen closets, and bath-rooms, — are situated between the corridor and the wards proper; and directly over these rooms are, at the end of each ward, five private rooms for paying patients, this part being two stories high, while the wards are but one story in height. Each ward is ninety-six feet in length and twenty-seven feet in width, and the ceiling is fourteen feet from the floor. This affords abundance of room for fifteen patients in each ward, so that the hospital can accommodate forty patients in all. The general plan of the wards is based upon that of the one-story buildings of the Boston City Hospital.

The heating of the hospital is by steam; in the halls and corridors by direct radiation, and in the wards by indirect radiation. In the main building there are open fire-places. In the wards the radiators are placed beneath the floor under the middle of the ward, air being supplied to them through galvanized iron conductors extending from the basement windows. Between the windows of the wards ventilating flues are constructed in the wall, opening near the floor and communicating with the ventilating chambers above the wards, which open into the outer air. Each of these flues is warmed by steam pipes, whereby a constant current is insured, whenever the steam is on. Near the ceilings are other flues, and in the ceilings direct openings into the ventilating chambers, which are used in warm weather.

The experience of the first month in the hospital showed the necessity of some means for insuring the draught of the ventilating flues and the readiness with which this could be accomplished. The flues being in the cold outer wall, and without the means of being heated, gave a downward draught or none at all, instead of an upward draught as was expected. The wards were practically unventilated, and soon became foul. This was remedied, at the suggestion of Dr. Peabody, by running a steam pipe up into each flue from the bottom. Since then the ventilation has been excellent and the air remarkably good. The ventilating chambers on the top of the wards are abundantly large for a person to walk in, and their projecting, artistic roofs add to the pleasing appearance of the buildings in general.

Owing to the elevated situation of the hospital it is thoroughly drained. The drainage is by iron pipes into catch-basins out-of-doors, which are connected by under-ground earthern pipes with the street sewer. The soil pipes all have ventilation pipes running to the tops of the roofs. The hospital is supplied with speaking tubes, telephone, electric bells, and electric appliances for lighting the gas, besides other conveniences for saving labor and easing one's temper, too numerous to mention. The influence of the hospital and its surroundings is manifest in the looks of cheerful resignation and hopefulness that light up the countenances of all the patients, even the most severe cases. Already the wards are sometimes full, so that patients have to be put in the corridor. An extension is being built at the western end of the corridor, to be used as a ward for patients who require to be isolated.

The total expense of what has already been finished has cost the city of Worcester $70,000, and one cannot but think that this is a very moderate expenditure to have accomplished so much, considering that the expense of grading and excavating has been great. No work of this kind could have been done so well without much thought, study, and consultation, and in this the trustees have been greatly aided, not only by the coöperation of their own staff of visiting physicians and surgeons, but also by the advice of officers of similar institutions both in Worcester and Boston.

When considering plans for the construction of the hospital the late superintendent, Dr. J. Bartlett Rich, and the present superintendent, Dr. Charles A. Peabody, visited the Boston City Hospital and the Massachusetts General Hospital, and gleaned much valuable information, and it is to the indefatigable energy of these two gentlemen in putting this information into use that the excellence of the Worcester City Hospital is mainly due. So much time and labor did Dr. Rich devote to planning, advising, and superintending the details of the building of the hospital, that when he resigned the office of superintendent to enter into private practice, on the first of December last, the trustees unanimously passed him a hearty vote of thanks, together with a solid appreciation of his services in the form of extra compensation.

Very truly yours,
DOUGLAS GRAHAM, M. D.

BOSTON, *August* 17.

UNITY OF POISON IN SCARLET, TYPHOID, PUERPERAL, AND OTHER INFECTIOUS FEVERS.

AN article by Dr. Griffith, in the *Glasgow Medical Journal* for August, presents quite forcibly the doctrine of the unity of poison in scarlet, typhoid, puerperal and other infectious fevers. These so-called different diseases being, according to the author's view, only differentiated products of evolution from one common morbific seed. Beginning with a reference to Dr. Playfair's case of puerperal fever at Bagshot Park, where a defective condition of the drains was found, and where the different inmates of the house had been suffering for some time with "various forms of indisposition, such as sore throat, diarrhœa, a general sense of malaise, etc.," he goes on to cite other cases, which at least are very suggestive. Among those which might be taken as illustrative of a differentiation of symptoms in the same individual is the following: —

"A lad, aged sixteen, was admitted into the Queen's Hospital, Birmingham, on January 30th, suffering from acute rheumatism. Had previously been healthy. There were no complications, cardiac or otherwise. On the third day after admission pleurisy supervened on the right side, and two days later on the left side also, and the patient gradually lapsed into a well-marked typhoid state. On February 15th, for the first time, a soft systolic murmur was heard over the præcordia, which could not be precisely localized. Five days later he became comatose, and died. The post-mortem examination showed double pleurisy, small metastatic abscesses (embolic?) in both lungs, and several infarcts in both kidneys, an enlarged softened spleen, and perforated ulceration of the tricuspid valve."

An interesting instance of a variety of groups of symptoms or "diseases" resulting in different individuals from the same apparent cause is the following: —

"In one orphanage to which I was called some time since, a girl sickened; she complained of sore throat, and was a little feverish. She got well; there was nothing of a so-called specific character. While she was getting well another girl fell ill of unmistakable scarlatina; the first began again to complain; scarlatina declared itself without a doubt. Another child was taken ill with diphtheria in combination with scarlatina; others had simply sore throat, or the same with general malaise, or the malaise without the throat affection, or some bowel irritation. All recovered but one, the last taken ill, and she had fully declared typhoid. She was sent to the hospital, where the diagnosis — typhoid — was confirmed. The children and attendants who were taken ill became so either simultaneously or within a few days of each other, though to every possible means of isolation and disinfection recourse was had. Investigation showed leaky water-closet pipe through the wall of the house, the children having been in no way exposed to any of the affections which demonstrated themselves in their midst."

OVULATION AND MENSTRUATION.

MR. EDITOR, — Mrs. D. was married four years ago last January, since which time she avers that she has had no sign of menstruation. She miscarried at seven months during the first year of connubial life; has had two living children since, — one two years, and the other one year old at present, — and is again *enciente*, being about six months along. She is a woman of the upper classes, and her word may be positively depended on. A. W. PARSONS.

HYPERPYREXIA IN ACUTE RHEUMATISM.

DR. ROBERT SINCLAIR, in the *Edinburgh Medical Journal*, reports a case of hyperpyrexia in acute rheumatism, ushered in by cessation of pain and of sweating, and by delirium and cyanosis, but without any pulmonary or cardiac complications. The temperature speedily ran up to 107.4° F. The patient was placed in a full bath at the temperature of 90° F., cooled rapidly down to 60° F. This at first caused alarming symptoms, but being persisted in for thirty minutes brought the temperature of the patient down to normal. The secondary rise was not extreme, and the subsequent progress of the case was good.

THE EPIDERMIC METHOD OF ADMINISTERING MEDICINES.

THE epidermic method is advocated by a recent Canadian writer for a wider range of drugs than those usually so administered. He claims that with a perfect solvent, especially if it be of a stimulating nature like alcohol, a marked physiological effect with very considerable precision of dose can be obtained. The palms of the hands are the parts most favorable and convenient for absorption, and quinia in double the doses required by the mouth is claimed by the writer to have an equal effect. If this method is to be depended upon, the advantages in the case of children and others with irritable stomachs are obvious.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 19, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from: The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	754	407	33.42	3.82	23.87	1.49	1.59
Philadelphia	846,984	439	208	7.52	2.28	—	1.49	2.74
Brooklyn	566,689	363	200	—	—	—	—	—
Chicago	503,304	440	210	34.05	7.49	26.45	2.04	2.04
Boston	362,535	208	96	41.76	1.92	33.60	.48	1.92
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	183	85	30.58	3.28	12.56	1.82	5.46
Cincinnati	255,708	119	55	32.76	5.04	15.12	4.10	3.36
New Orleans	216,140	104	24	—	—	—	—	—
District of Columbia	177,638	74	27	29.70	4.05	18.90	8.10	—
Pittsburgh	156,381	96	55	42.68	1.04	23.94	10.41	2.08
Buffalo	155,137	96	61	51.01	5.21	45.70	3.02	—
Milwaukee	115,578	78	56	35.90	11.54	30.77	—	—
Providence	104,857	45	19	37.74	—	37.74	—	—
New Haven	62,882	41	20	36.58	—	24.39	4.88	—
Charleston	49,999	39	10	17.95	2.56	10.26	—	—
Nashville	43,461	18	7	50.00	—	11.11	—	—
Lowell	59,485	36	20	41.66	—	41.66	—	—
Worcester	58,295	26	10	50.00	—	34.31	7.69	3.85
Cambridge	52,740	34	20	35.28	8.82	32.34	—	2.94
Fall River	49,006	42	21	49.98	—	38.08	4.76	—
Lawrence	39,178	24	9	33.26	—	33.26	—	—
Lynn	38,284	34	16	44.10	2.94	38.22	7.88	—
Springfield	33,340	13	7	—	—	—	—	—
Salem	27,598	26	5	3.85	—	3.85	—	—
New Bedford	26,875	18	13	66.66	—	61.06	—	—
Somerville	24,985	8	2	—	—	—	—	—
Holyoke	21,851	17	9	53.00	5.88	29.44	17.64	—
Chelsea	21,785	9	4	11.11	—	—	—	—
Taunton	21,213	10	5	30.00	—	—	—	10.00
Gloucester	19,329	2	2	—	—	—	—	—
Haverhill	18,475	19	11	63.18	5.26	46.37	—	10.53
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	12	7	76.00	—	44.33	—	—
Newburyport	13,537	7	2	28.56	—	28.56	—	—
Fitchburg	12,405	5	4	—	—	—	—	—
Malden	12,017	8	3	25.00	—	12.50	—	—
Twenty Massachusetts towns	154,019	76	48	84.19	6.58	24.99	3.95	5.26

Deaths reported 3523 (no reports from St. Louis): under five years of age 1658: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1194, consumption 306, lung diseases 103, diarrhœal diseases 738, typhoid fever 76, diphtheria and croup 66, whooping-cough 38, malarial fever 28, scarlet fever 27, cerebro-spinal meningitis 20, measles 19, small-pox 18, puerperal fever 10, erysipelas eight, typhus fever one. From *whooping-cough*, New York 16, Pittsburgh four, Philadelphia and Boston three each, New Haven and Charleston two each, Chicago, Baltimore, Cincinnati, Milwaukee, Holyoke, Chelsea, Taunton, and Malden one each. From *malarial fever*, New York 19, Baltimore, District of Columbia, and Nashville two each, Chicago, New Haven, and Charleston one each. From *scarlet fever*, New York nine, Philadelphia six, Cincinnati three, Chicago, Boston, and Buffalo two each, Pittsburgh one. From *cerebro-spinal meningitis*, New York five, Chicago and Milwaukee three each, Philadelphia and Fall River two each, Cincinnati, Worcester, New Bedford, and Taunton one each. From *measles*, New York seven, Nashville five, Chicago four, Boston two, Pittsburgh one. From *small-pox*, Baltimore 10, Cincinnati five, Philadelphia two, Chicago one. From *puerperal fever*, Boston four, Chicago three, New York, Cincinnati and Fall River one each. From *erysipelas*, New York three, Brockton two, Philadelphia, Baltimore, and Cincinnati one each. From *typhus fever*, New York one.

Fifty-two cases of small-pox were reported in Baltimore, Cincinnati 19; diphtheria 17, typhoid fever 15, scarlet fever 12 in Boston; scarlet fever 10, and diphtheria one, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,080,560 (population of the State 1,783,086), the total death-rate for the week was 30.31, against 33.34 and 30.73 for the previous two weeks.

For the week ending July 29th, in 173 German cities and towns, with an estimated population of 8,546,467, the death-rate was 29.8. Deaths reported 4896: under five 3100; diarrhœal diseases 503, consumption 469, lung diseases 301, diphtheria and croup 139, scarlet fever 101, typhoid fever 61, whooping-cough 52, measles and rötheln 46, puerperal fever seven, small-pox (Cologne two, Danzig one) three, typhus fever (Posen one) one. The death-rates ranged from 49.5 in Königsberg to 12.6 in Bremen; Breslau 43.2; Munich 23.8; Dresden 29.8; Berlin 38.7; Leipzig 21.7; Hamburg 26.4; Cologne 36.5; Frankfort a. M. 18.9; Strasburg 23.3.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending August 5th, the death-rate was 20.1. Deaths reported 3167: acute diseases of the respiratory organs (London) 193, diarrhœa 390, scarlet fever 86, whooping-cough 78, measles 74, fever 50, diphtheria 16, small-pox (London five) six. The death-rates ranged from 10.6 in Derby to 30.8 in Manchester; London 18.4; Wolverhampton 18.4; Bradford 19.3; Sheffield 22.6; Nottingham 23.7; Newcastle-on-Tyne 24; Liverpool 25.1. In Edinburgh 18.6; Glasgow 24.3; Dublin 22.9.

For the week ending August 5th, in the Swiss towns, population 494,390, there were 35 deaths from diarrhœal diseases, consumption 26, acute diseases of the respiratory organs 14, diphtheria and croup six, typhoid fever five, scarlet fever two, erysipelas two, measles one. The death-rates were, at Geneva 12.4; Zurich 16.5; Basle 19.6; Berne 18.4.

The meteorological record for the week ending August 19th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	29.956	70	81	65	78	45	51	58	W	E	NE	8	12	4	C	F	C	—	—
Mon., 14	30.028	69	81	52	64	57	68	63	NW	SE	SW	1	8	11	C	F	C	—	—
Tues., 15	30.007	78	91	62	82	27	76	62	SW	SW	SW	12	16	10	C	C	C	—	—
Wed., 16	29.924	69	76	65	92	93	100	95	S	E	W	6	11	4	O	O	G	—	.43
Thurs., 17	29.741	78	90	67	84	40	73	66	W	W	W	11	12	4	C	F	C	—	—
Fri., 18	29.942	66	76	59	58	33	62	51	NW	NW	NW	16	7	12	O	C	C	—	—
Sat., 19	30.132	62	73	51	59	30	60	50	NW	W	NW	13	9	6	C	F	C	—	—
Means, the week.	29.961	70	90	51				64										2.08	.43

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OBITUARY.

Died, at Peabody, Mass., July 26, 1882, of inflammation of the brain, Dr. Daniel M. Elliot, aged thirty-nine years, eight months, sixteen days.

Dr. Elliot graduated at the Harvard Medical School in 1869, was settled in practice for a short time at Littleton, and subsequently for a longer period at South Deerfield, Mass. In 1877 he established himself in Peabody, and in a very short time acquired the confidence of the people, and has had a large and successful, though laborious practice, which was continued until within three weeks of his demise. His death will be greatly regretted by a large circle of his late patients and friends, as well as by his brother practitioners, whom he always treated with marked fairness and courtesy. G. S. O.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 19, 1882, TO AUGUST 25, 1882.

Murray, Robert, colonel and surgeon. Relieved from duty as medical director, Military Division of the Missouri, and to report in person to the commanding general, Military Division of the Atlantic and Department of the East, for duty as medical director of that division and department. S. O. 191, A. G. O., August 18, 1882.

Billings, John S., major and surgeon. By direction of the President relieved from duty as a member of the National Board of Health. S. O. 190, A. G. O., August 17, 1882.

Smart, Charles, major and surgeon. By direction of the President detailed as a member of the National Board of Health, organized under Act approved March 3, 1879, *vice* Major Billings, surgeon, relieved. S. O. 190, C. S., A. G. O.

Byrne, Charles B., captain and assistant surgeon. The leave of absence granted him in S. O. 68, July 12, 1882, Department of the South, is extended two months. S. O. 189, A. G. O., August 16, 1882.

Spencer, William G., captain and assistant surgeon. The leave of absence granted him in S. O. 80, April 7, 1882, from A. G. O., is extended two months. S. O. 191, C. S., A. G. O.

Macauley, C. N. B., first lieutenant and assistant surgeon. To report in person to the commanding general, Department of the East, for assignment to temporary duty. S. O. 192, A. G. O., August 19, 1882.

Gynæcological Society of Boston. — The next regular meeting will be held at the Medical Library Rooms, on the first Thursday of September, at eleven o'clock A. M.

Henry M. Field, M. D., *Secretary.*

American Academy of Medicine. — At a recent meeting of the Council of the American Academy of Medicine the annual meeting of the Academy was postponed until Thursday, October 26th, when it will take place at Philadelphia, at the time of the Bicentennial Celebration in that city.

Books and Pamphlets Received. — Proceedings of the Connecticut Medical Society, 1882. Ninety-First Annual Convention, held at New Haven, May 24th and 25th. New Series. Vol. II. No. 3. Published by the Society, C. W. Chamberlain, M. D., Secretary, Hartford, Conn. 1882.

The Practice of Gynæcology in Ancient Times. By Edward W. Jenks, M. D., LL. D. (Reprint.)

The Change of Life in Health and Disease. A Clinical Treatise on the Diseases of the Ganglionic Nervous System incidental to Women at the Decline of Life. By Edward John Tilt, M. D. Philadelphia: P. Blakiston, Son & Co. 1882.

Transactions of the Michigan State Medical Society for the Year 1882.

Diphtheritic Ulceration of the Air-Passages and its Relation to Pulmonary Phthisis. By John D. Mackenzie, M. D., of Baltimore. (Reprint from the Transactions of the Medical and Chirurgical Faculty of the State of Maryland.)

Class Work of the Pupils of the Illinois Asylum for Feeble-Minded Children for the School Year ending June 30, 1882, together with the Commencement Exercises held in the Chapel of the Asylum, June 22, 1882.

Practical Medical Anatomy. A Guide to the Physician in the Study of the Relations of the Viscera to each other in Health and Disease, and in the Diagnosis of the Medical and Surgical Conditions of the Anatomical Structures of the Head and Trunk. By Ambrose L. Ranney, M. D. New York: William Wood & Co. 1882. Wood's Library of Standard Medical Authors.

The Efficient Dosage of Certain Remedies used in the Treatment of Nervous Diseases. By E. C. Seguin, M. D., New York. (Reprint.)

Medical Department of the University of Georgetown, D. C. Announcement of the Thirty-Third Medical Session. 1882–1883.

Transactions of the Medical Society of the State of West Virginia, Fourteenth and Fifteenth Annual Sessions. 1881–1882.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-Fourth Annual Session. Baltimore, April, 1882.

La Lithotritie doit être faite sans Traumatisme. Par le Dr. Reliquet, Paris. (Reprint.)

Notes on Contagious Diseases of the Eyes in Schools and Asylums. By Cornelius R. Agnew, A. M., M. D., New York. (Reprint.)

Tonsillotomy and its Complication by Hæmorrhage. By Dr. N. A. Powell. (Reprint.)

On the Precautions Necessary to Prevent the Diffusion of Hydrophobia. By Thomas M. Dolan, L. R. C. P., F. R. C. S., etc. (Reprint.)

Ueber das Anlegen von Verbänden Nach Hüftgelenkresectionen. Von Dr. L. von Lesser, Leipzig. (Reprint.)

Fifth Announcement of the United States Medical College in the City of New York. Session 1882–1883.

Forty-Second Annual Announcement and Catalogue of the Missouri Medical College, 1882–1883. St. Louis.

Circulars of Information of the Bureau of Education, No. 2, 1882. Proceedings of the Department of Superintendence of the National Educational Association at its Meeting at Washington, March 21–23, 1882.

Lectures.

CLINICAL LECTURE.[1]

DELIVERED AT BELLEVUE HOSPITAL, NEW YORK.

BY AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine, and Clinical Medicine, in Bellevue Hospital Medical College.

Gentlemen, — You will remember that in my lecture on Bright's disease last week I presented one patient who was passing an unusually large amount of urine. After the lecture I learned that this was due to a great extent to the diuretic remedies that he was taking, although without the aid of these the quantity was very considerable. You will thus see that a different treatment has been pursued here from that which was adopted by the physician whom I met in consultation in a case of Bright's disease, and who, you will remember, had actually been endeavoring to diminish the quantity of urine which his patient was passing.

To-day I will show you first a case of tuberculous laryngitis by way of contrast to the one of syphilitic laryngitis which I had the pleasure of recently presenting before the class. Afterward I have a case of advanced phthisis to bring before you, in which the physical signs of cavity and solidification of the lung can be studied with great advantage, and finally, I will introduce a patient suffering from abdominal dropsy dependent upon cirrhosis of the liver, upon whom the operation of paracentesis will be performed in your presence.

TUBERCULOUS LARYNGITIS.

Here, then, is our first patient. When, in reply to my questions, he tells me that he lost his voice about two months since, and that this occurred not suddenly, but gradually, you perceive at once that he has aphonia, and you notice that the attempt to speak is attended with a visible effort. The latter point distinguishes it from paralytic aphonia, in which there is no effort in speaking, and the fact that the trouble has come on gradually distinguishes it from nervous aphonia, in which the voice is often lost quite suddenly, and as suddenly recovered. The aphonia here, however, has the same general characteristics as that due to syphilis, which you saw in the other patient. The diagnosis between the two affections is to be made from the past history and the concomitant features of the case. In the former patient there was a distinct history of syphilis, while repeated examinations of the chest failed to detect any disease in the lungs. In the present case, on the other hand, there is well-marked tuberculous disease of the lungs, and the past history shows that the pulmonary trouble commenced before that in the larynx. Long ago the precedence, in point of time, of the tuberculous deposit in the larynx was established as the rule, although this sequence has recently been doubted in certain quarters. Personally I believe that, with possibly a very rare exception, this is always the case, and it may be that in some instances where the larynx appears to be affected first the tuberculous deposit in the lungs is so small that it may altogether escape detection until after the laryngeal affection has been recognized. In this patient there is no difficulty whatever in determining the presence of disease in the lungs, and also the fact that it has existed for a considerable time, while the trouble in the larynx, as you have heard, is quite recent. A glance at this man's pallid and emaciated face shows that he is suffering from some grave, wasting disease, and an examination of the chest at once reveals dullness on percussion, feeble respiratory murmur, and more or less broncho-vesicular respiration at the summit of the right lung. In this case at least the pulmonary disease preceded the laryngeal. The young man has had a cough for over six months, and says he has emaciated for more than three months, while it is only two months since the loss of voice, which has gradually become complete, commenced.

In regard to tuberculous laryngitis, there is one point of practical importance to which I will call your attention before dismissing the patient. It is this, that the laryngitis, unless it should interfere with alimentation, does not render the prognosis of the pulmonary tuberculosis more unfavorable than if it were not present, so that, as a rule, the patient stands just as good a chance of recovery, or of the disease being held in abeyance, whether this complication is present or not. I have arrived at this conclusion after quite an extensive experience, and therefore I give it to you with considerable confidence.

ADVANCED PHTHISIS WITH WELL-MARKED PHYSICAL SIGNS.

Our next patient is a female, well on in life, who is suffering from advanced phthisis, there being a cavity at the summit of the left lung, and around this the evidences of solidification. I will not take up your time by reading the history of the case, which would offer but little of interest, but I propose at once to describe the physical signs, which are characteristic of the condition mentioned, and which are remarkably well shown here. The patient is rather feeble, but though now in bed she is not confined to the bed all the time, but sits up a portion of every day.

If you direct your eyes to the chest from above downward, and compare the two sides, you will find it very evident that there is a shrinkage of the lung on the left side, and a corresponding sinking in of the chest wall. When the patient makes forced respiration you perceive that the left side is comparatively motionless. We have thus the evidence of diminished volume and diminished expansion of the left lung at the apex. From the lack of mobility we may also infer the existence of old pleuritic adhesions. So much for inspection. When we practice percussion at a certain part of the left apex, which I now indicate, we get amphoric tympanitis, and on auscultation at this spot there is found to be cavernous respiration. Just below this point we get well-marked bronchial respiration, and it will therefore, perhaps, be well for me to enumerate the characters which distinguish these two signs. In studying physical diagnosis I may remark, in passing, it is very important that the learner should first get a clear and definite appreciation of the different signs before he attempts to verify them in the subject. It was a no less distinguished diagnostician than Skoda who declared that there was no appreciable difference between cavernous and bronchial respiration, and to this day all the German authorities adhere to the same opinion. I hardly know how to account for the latter fact unless it is that their reverence for the weight of authority forbids them to dispute such a dictum. Notwithstanding this, however, it is certainly true that there are no two signs in the whole range of physical diagnosis that are more readily distinguishable than these, and if our brethren on the other side of the Atlantic had been a little more willing to learn from American teachers, they would not have remained in error so long on this point. What, then, are the special characteristics of these two signs? In cavernous respiration inspiration is blowing and low in pitch, while expiration has the same quality with a still lower pitch. Sometimes there is a slight musical intonation, and this, when present, is another characteristic point. In bronchial respiration, on the other hand, both the inspiratory and expiratory sounds have a quality which the word *tubular* distinctly defines, and both are high in pitch. If there is any difference in pitch the latter is higher than the former.

---

[1] Specially reported for the Journal.

Now as to the vocal sounds. When there is a cavity there is intense vocal resonance; but, with the exception of the intensity, the sound does not differ from that of normal vocal resonance, its quality being unaltered. When there is solidification, however, we get bronchophony instead of this, and the same is true with the whispered voice. Like the respiratory murmur it is high-pitched and tubular, while cavernous whispering is low-pitched and hollow in tone. In this case we have within a small space the evidences of a cavity, of complete solidification, and of less marked solidification; and the signs of each of these conditions are perfectly clear and distinct. It is always well to remember, however, that cavernous sounds vary somewhat at different times, according to the accumulation of morbid products in the cavity.

ASCITES DUE TO CIRRHOSIS OF THE LIVER.

Some of you may remember this patient, who was brought before the class during the winter course. His name is Henry R.; he is fifty years of age, a native of Germany, and a waterman by occupation. He was admitted to the hospital nine months ago. He says he has been in the habit of drinking whiskey, but not daily. In the spring of 1878, or four years ago, he first noticed the enlargement of his abdomen. About the same time he found that his strength was diminishing, while he was often dizzy and short of breath. The bowels were constipated, and a little later there were well-marked symptoms of jaundice. There were no hæmorrhages from the stomach or bowels, as is not infrequently the case in cirrhosis of the liver. In April, 1879, he was admitted to the hospital, and all the signs of fluid in the peritonæum were then present. The ascites diminished under treatment, however, and he was discharged. Somewhat later he was readmitted with an increased accumulation of fluid, and on the 7th of August, 1879, he was tapped, when 308 ounces of serum were withdrawn. On November 28, 1879, he was tapped again, and 114 ounces removed. On the 23d of December 88 ounces, and on the 6th of January, 1880, 254 ounces, were withdrawn. Between that date and May 1st he was tapped three times, over 800 ounces being withdrawn. Within six months, it will thus be seen, he was tapped no less than six times. After this he was able to return to his work, and the fluid did not accumulate so rapidly. Such an improvement as this is not infrequently met with, and in some instances the fluid never returns after repeated tappings. The reason probably is that while these tappings are being made from time to time there is a chance to afford the patient the benefit of change of diet and healthful surroundings. I believe that it is advisable and important to tap whenever the fluid accumulates in sufficiently large quantity to cause the patient suffering or inconvenience.

After the last tapping mentioned, which was in April, 1880, this patient got along very well without any tapping until July, 1881, when he entered the hospital again. Thus, we see that after having been tapped no less than six times in six months he actually went fifteen months without any need of tapping. It is probable that during this latter period he returned to his old habits of intemperance. The record states that it was found that the liver was diminished in size, while the spleen was enlarged. The specific gravity of the urine was 1017, and it contained no albumen. On the 13th of July, 1881, he was tapped again, and 534 ounces of fluid withdrawn. He then went without tapping until October 6th, when 427 ounces were withdrawn. Since then, the date of the last tapping, the fluid has accumulated very slowly, and the patient has been quite comfortable most of the time.

This case is an instructive one, then, since it shows the soundness of tapping as soon as the fluid in the peritonæum has accumulated to a sufficient extent to cause inconvenience in respiration, movements of the body, alimentation, etc. This is in direct opposition to the teaching that has prevailed until very recently, and that is still maintained by many of the highest authorities. It is, however, the practice which I have recommended for the last twenty-five years, and I do not hesitate to say that the more cases I see the more am I impressed with its advantageousness. It is, moreover, a very important practical point as regards the future of the case, because it not only adds materially to the comfort of the patient, but has a direct effect in prolonging life.

We are now ready to go on with the operation of paracentesis, which will be performed by the house-physician; and before the trocar is inserted into the abdominal walls local anæsthesia will be produced by means of the convenient ether spray. In connection with this case I may mention another which I remember seeing some time ago, and which presented quite a curious appearance. The patient, having been tapped a number of times, had been thought to be entirely well, as the fluid showed no tendency to return for a long time; but at last it came back, and, curiously enough, occasioned a marked bulging at all the points where the tappings had been previously made.

At the completion of the paracentesis to-day I shall be glad to meet any of the members of the senior class who may desire to come in the wards, where they will have an opportunity of personally verifying the various signs of which I have spoken in connection with the patient suffering from advanced phthisis.

— An unirritating antiseptic dressing used in some of the Paris hospitals for superficial wounds as well as for eczema and intertrigo is the following: Finely powdered boracic acid 6, vaseline 30; to this may be added balsam of Peru 0.5. This, though cheaper and more easily made than Lister's ointment of wax, paraffine, oil, and boracic acid, is, perhaps, not better than the carbolic cosmoline employed in some of the hospitals in this city.

Original Articles.

GLYCOSURIA.

BY OSCAR C. DEWOLF, M. A., M. D.,
Professor of State Medicine and Public Hygiene, Chicago Medical College.

It requires but little reflection, etymologically, to justify a preference for the word glycosuria in naming the disease upon which Aretæus first wrote as diabetes, in ignorance of the saccharine and non-saccharine conditions existing in what are now known to be widely different diseases. Though diabetes mellitus has been used to designate the constant and glycosuria the temporary occurrence of sugar in the urine, the absurdity of any such distinction is too apparent. It is safe to predict that the terms chronic and temporary glycosuria will take the place of the older but inexact names, mellituria, etc. *Zuckerharnruhr* is an expressive German equivalent.

The literature of the subject is in a scattered and generally inconclusive state, though this is not peculiar to articles upon any one disease. The best work accomplished in an investigation of glycosuria is that by the late Claude Bernard.[1] With this physiologist's conclusions (familiar to all as the glycogen and glucose theory) as a *datum plane*, to use an engineering term, thousands of "contributions," good, bad, and useless, have been presented to the medical reader. A glance at the seven pages of bibliography by Senator,[2] and through the pages of the American *Index Medicus*, suffices to discourage any other than the sciolistic student, whose sole object is to *appear* to know. One of the *Esse Quam Videri* genus would soon learn that the literature of the subject is immensely more voluminous than Senator indicates, and that between compassing it and indulging in original experimentation and investigation an ordinary life-time would not suffice. Doubtless nine tenths of what has been written upon diabetes mellitus is worthless, owing to lack of proper education or surroundings on the part of the writer, or insufficient time to properly analyze cases. The earnest student cannot reform the world, he must take things as they are, and make the best of them. In this endeavor he will be straightway appalled at the polemics indulged in by "authorities," and upon points he imagined were fundamentally established. T. Lauder Brunton [3] gives a fair review of this aspect of the mellituria question, with the discussions, denials, and controversies between contemporary and other authors and investigators, such as Rollo, Tiedemann, Gmelin, Ambrosiani, Dumas, Bouchardat, Liebig, Bernard, Bouley, Poggiale, Longet, Pavy, Flint, and others. The labors of the ideal physician are presumed to be largely altruistic, but I cannot avoid the conviction that were some such brilliant individuals as Newton, Descartes, Hunter, Huxley, or Tyndall afflicted with thorough medical education and glycosuria at the same time (providing the latter impaired their minds and usefulness as little as the former), their egoistic efforts might and in all probability would result in something definite in this direction.

In the midst of distracting public duties the subject of glycosuria has recently occasioned me much concern, and I have attempted its review, the results of which I submit in the shape of conclusions rather than disquisitions and representations of the treatment in text-books accessible to all; not in the spirit of Tom Hood's "Otahietan cook, who thought no food was fit to eat till he had chewed it," but rather with the *animus* of Chambers, who recognized the impossibility of treating any disease (scientifically) without having a hypothesis as to its nature, and as to the best means of combatting the disorder. Later in the year I hope to be able to communicate to this Journal the result of some clinical observations in the matter of glycosuric treatment.

Chemical text-books and works on the practice of medicine discuss far more fully than could be done in this essay such matters as urine analysis and the relative quantities of fluid and food ingestion and excretion. In fact, so much space in current print is allotted to a consideration of these threadbare points that only this mention will be made as an excuse for omitting further reference to them.

Naturally enough the disease was in ancient times supposed to be seated in the kidneys. Every tyro in medicine now knows that to Claude Bernard we are indebted for the discovery of the connection between glycosuria and a disarrangement of the liver function. That puncture of a portion of the lower floor of the fourth ventricle will produce sugar in the urine is also well known, better known than that diabetes insipidus has also a so-called centre in the medulla, just above the glycosuric point. Still less known is it that lesions of the sympathetic system below the ventricular point may likewise cause mellituria, and that pathological conditions of the vagi may induce phases of the disorder.[4]

Glancing over the various accounts of diabetic ætiology, we find that heredity as a predisposing cause, or a factor at all, is debatable. Granting that neuropathic parents have had offspring in whom glycosuria has been developed, the question of heredity then narrows itself to the inquiry whether defects of the nervous organization may not assume different ways of manifestation in offspring just as cachexia does. It is agreed that men are more liable to glycosuria than women, and that it may appear at any age, but until we have more pains-taking statisticians scattered over countries other than those reported from by Griesinger, Seegen, Schmitz, and Dickenson, we may conclude that we have imperfect data from which to make deductions. Trousseau regards corpulence as a predisposing cause, and when we consider the chemical relationship of fat and sugar it is not to be wondered at that retrograde metamorphosis would be as liable to occur as that sugar should form fat by oxidation. Thus obesity might be considered ætiological as well as predisposing. Another view would be that starch or glycogen, instead of undergoing transformation into fat directly or indirectly, by some perversion of function became glucose instead. So far as I am aware these probabilities have had no consideration anywhere.

Reviewing the neurological aspect of the disease, there seems to be very much yet to be done in this field. Cyon and Aladoff[5] figure the course of the vaso-motor nerves of the liver from the base of the brain downward. This can but be hypothetical. Kronecker,[1] at Leipsic, confines all vaso-motor centres to the floor of the fourth ventricle, but Luys and Jewell[2] suppose that there is a continuous column of such centres for the whole body in the medulla and cord, while Brown-Séquard extends them to cerebellum and brain, and Clevenger[3] agrees with the latter, but goes further in extending them to the entire cerebro-spinal system. Cyon and Aladoff give the glycosuric tract as passing down the spinal cord to some of the communicating branches of the sympathetic, thence through the splanchnic, nerves to the liver. Admitting that some such tract undoubtedly exists, the next step is to ascertain how a lesion would operate through it to produce sugar in the liver. The generally accepted view is (from some very notable experiments) that dilatation of the hepatic blood-vessels through vasomotor paralysis, thus induced, produces engorgement, and that sugar in the urine follows. As to *why* sugar-production follows this interference with liver function much has been written, and doubtless much more will be. Glycosuria has been likewise produced by injuries of the cerebral lobes, cerebellum, optic thalami, and sciatic nerve, acccording to Schiff, Eckhard, and Pavy, which fact would invalidate the idea of a single tract and the widely noticed ventricular irritation of Bernard as a cause, and account for glucose being somewhat commonly found in the urine of those suffering from any mental or nervous ailment.

---

[1] Claude Bernard, Mémoires de la Soc. de Biologie, 1849, vol. i., p. 221, Nouvelles Fonctions du Foie Considérée comme l'Organe Producteur de Matière Sucrée. Paris, 1853.

[2] Senator, Ziemssen's Cyclopædia, vol. xvi., pp. 851-858.

[3] T. Lauder Brunton, Reynold's System of Medicine, vol. iii., p. 585, et seq.

[4] Marcus and Wiet, Le Progrès Médicale, No. 21. Proc. Soc. Biol., May, 1881.

[5] Cyon and Aladoff, Bulletin de l'Acad. de Petersbourg, vol. viii.

Taking these things into consideration, we may well wonder whether the transfer of the disease from the kidneys to the liver as a seat is more than a step toward a clearer, broader view of both the disease and bodily functions in general. Brunton thinks "we are justified in believing that the sugar which is present in the blood becomes converted by the aid of a ferment in the blood, muscles, and probably lungs, also, into lactic acid and glycerine, and then undergoes combustion, thus sustaining the temperature of the body. Supposing, however, that this ferment is deficient, a greater or less proportion of the sugar will not undergo conversion into acid, and will then remain unconsumed." The temptation to be discursive and polemical at this point is very great, but I prefer to present deductions which I have made while referring to some recent articles bearing more or less directly upon the neurology of the subject.[4] Bernard himself enlarged upon his original views, and in a communication to the Academy of Sciences, January 10, 1876, reported in the *Revue Scientifique*, summarizes the principal points elicited, which seem to have been overlooked by many who have written upon glycosuria. It affords a good *résumé* of our present knowledge of the subject, and is worth reproducing here: —

"Animal blood always contains sugar. This glycæmia depends on a normal function of the liver. These facts were established by Bernard and those succeeding him. The physiological production of sugar in the liver is subject to the influence of the nervous system, and by wounding a particular point in the fourth ventricle not far from the origin of the vagi nerves, the sugar is developed superabundantly, rendering the animal rapidly diabetic; from this arose the theory of the glycogenic function of the liver. This function only becomes developed at a certain period of intra-uterine life, but sugar is none the less lacking in the organism undergoing evolution. Sugar exists in the allantoid and amniotic liquids and in the urine, and diabetes is, after a fashion, the normal condition of the fœtus. Bernard from this regards glycogenesis as a general physiological phenomenon, *accompanying all the manifestations of life in animals and plants.* Later, the discovery of the glycogenic matter to some extent changes the face of the problem in connecting it with one of the most difficult questions of general physiology, that of the intimate nutrition of the tissues. The theories of nutrition have always allotted to the blood the principal part in the chemical changes that take place in the living organism, but M. Bernard has shown that instead of seeking directly in the blood for the substance preceding the sugar and producing it, it is necessary to place it in the hepatic tissue itself."

M. Lancereaux, it seems to me, took a step in the right direction, in announcing two diabetic types, in a paper read before the French Association for the Advancement of Science, August, 1879. Lancereaux claims that there are *fat and lean types.* The first begins insidiously between the ages of twenty and thirty with obesity, death occurring from phlegmon, rarely from pulmonary consumption. The lean cases spring suddenly from a condition of previous good health, and last from one to six years, or more frequently terminate with phthisis pulmonalis which begins with chronic pneumonia. *Destruction of the pancreas* was recognized in two of the "lean" cases examined, and he infers a direct relation between pancreatic destruction and glycosuria, claiming that there are good grounds for a nosological distinction of these two varieties.

While the obese cases may be simply such as Senator considers predisposed, it would be well to separate all such cases hereafter and see whether there was the uniformity of phenomena mentioned by Lancereaux. Similarly, I fancy, we may be enabled to diagnose the especial lesion and its seat by some such sensible proceeding, instead of contenting ourselves with the bare fact of sugar being constantly found in the urine. A rational system of treatment can thus be inaugurated which will enable us to address ourselves intelligently to *causes* instead of effects. For example, neuropathic cases might find especial benefit from neurotics, while those originating in obesity would derive no advantage from such treatment. All measures adopted in the latter cases should partake of an effort to aid in decreasing fat production, and an interesting point in this connection is afforded us by Immermann:[5] —

"In violent voluntary motions of the body not only will less fat be produced, but, owing to the more energetic process of oxydation in the tissues, more lipogenous material will be destroyed." Hence the observations of Bouchardat, Kuelz, and Trousseau, that active muscular movements are capable of lowering the excretions of sugar, have a rational foundation in the presumption that both these hydrocarbonaceous substances, fat and sugar, are burned up in the muscles under proper conditions, and that both are fuels (so to speak) which if allowed to accumulate become pathological and consequently pernicious. On the other hand, the inappropriateness of much exercise for the enfeebled non-obese cases might soon be made apparent by trial.

---

[1] Vulpian, Rev. Scient., 1874, No. 35.

[2] Journal of Nervous and Mental Disease, vol. i., p. 116.

[3] Op. cit., October, 1880.

[4] Painful Symmetrical Neuralgia in Diabetes, Sciatic and Dental, Le Progrès Medical. M. J. Worms, Session Paris Acad. Med., September 10, 1880. Lesions of the Brain in Diabetes, Stevens' Triennial Prize, January 1, 1882 (to be awarded March, 1882, at the annual commencement of the New York College of Physicians and Surgeons). Changes of the Sympathetic in Diabetes, Poniklo, London Lancet, May, 1878. Influence of the Nervous System on the Formation of Sugar, M. Laffont, Progrès Medical, No. 10, 1880. Glucose Tests, Science (New York), December 24, 1881, p. 616. The Dynamo-Chemical Theory of Diabetic Glycæmia, M. Fleury, Acad. de Médicine, April 10, 1877, Bull. Gén. de Thérapeutique. The Teeth in Diabetes, Magitot, Journal de Médicine de Bordeaux, January 1, 1882. Clinical Observations of Diabetes Mellitus, New York Academy of Medicine, stated meeting, February 16, 1882, New York Medical Record, February 25, 1882.

[5] Immermann. Corpulence. Ziemssen's Cyclopœdia, xvi., page 647.

(*To be concluded.*)

◆

ERYTHROXYLON COCA; ITS PHYSIOLOGICAL EFFECT, AND ESPECIALLY ITS EFFECT ON THE EXCRETION OF UREA BY THE KIDNEYS.[1]

BY ATHERTON P. MASON, M. D.

Erythroxylon coca is a shrub growing in various countries of South America. The leaf is the part of the shrub used medicinally, or perhaps it were better at the present time to say, physiologically. The leaf is rather oval in shape, and about two inches in length. It has a bitter, pungent taste when green. The natives collect the leaves and dry them carefully in the sun. A large amount is produced annually. The dried leaves taste like tea.

Although this is a comparatively new drug to us, yet its history shows that it has been in use among the aborigines of South America for many centuries, and they appear to have regarded it with very high favor. They attributed a divine origin to it, and this fact led the Spaniards, after their conquest of the natives, to prohibit its use; but later their religious scruples gave way, and this seems to bear considerable testimony to the value of the drug, for the cause of the change in their views was due to the fact that they found that the natives could do more and better work with, than without, coca. Their method of taking the drug was to chew the leaves mixed with a little ashes or lime.

The principal constituents of the coca leaf are first, *coca tannic acid*, a peculiar tannin, reacting green with iron salts; second, *cocaina*, a fixed crystallizable alkaloid of a bitter taste, and producing numbness of the tongue; third, a volatile alkaloid, *hygrina*, which was obtained by Lossen as a thick, pale yellow oil of a burning taste and alkaline reaction.

In regard to the physiological effect of coca it seems to be pretty well determined in case of animals. Briefly stated, in large doses it causes tetanic convulsions; in medium doses it diminishes and then extinguishes sensibility; in small doses it causes hyperæsthesia, dilatation of the pupils, and diminution of movement, apparently from loss of coördination. The action of the heart is first increased, then diminished. In regard to man results are not nearly as definite. Until very recently the amount of the drug imported has been small, and the quality generally not by any means the best. The only point upon which experimenters seem agreed is that it enables the user to perform labor with less fatigue than he otherwise could. Christison observed that it entirely prevented fatigue after long-continued walking. The weight of evidence seems to show that habitual excessive use of the drug is deleterious to mind and body.

Experimenters are not agreed as to the effect of coca on the excretion of urea. Ott found that the amount of urea in the urine was diminished during its use, while Gazeau found that it was increased. On account of this diversity of opinion it seemed that it would be interesting, and possibly of some value, to undertake a series of experiments with coca, paying particular attention to this point.

Before speaking of its action on the excretion of urea I wish to allude briefly to its effects in other ways. During my experiments I used coca leaves, Wyeth's fluid extract of coca, and Thayer's fluid extract of coca. Shortly after taking the drug I felt slight weakness in the legs, passing away gradually. My spirits were more buoyant, and walking (which was the form of exercise I took mostly) seemed easier. It seemed to produce a sort of dream-like condition, and I would walk almost automatically at times. I always noticed dilatation of the pupils. I felt fresher in the evening after a long walk when I had taken coca than when I had not, and often noticed a tendency to wakefulness in the former case on going to bed. On the whole, I think that I obtained more decided effects from the fluid extracts (especially Wyeth's) than from the leaves, and the former are certainly more convenient to take.

I computed the amount of urea by the hypobromite of sodium method. The solution of hypobromite of sodium was made by dissolving 50 grammes of caustic soda in 125 cc. of water, and when cold adding 12 cc. of bromine. This solution, added to urine, decomposes the urea, setting free nitrogen. The apparatus used was first a large test tube having two bulbs blown at the end; into the mouth of this tube fitted a rubber stopper having two holes through it; through one of them ran a glass tube of small size which was connected by rubber tubing to a 50 cc. burette inverted in a 250 cc. urine jar nearly full of water; a solid glass rod passed through the second hole in the stopper. Two cc. of the urine to be tested were put into one bulb of the glass tube, and 5 or 6 cc. of the hypobromite of sodium solution into the other, and then the rubber

TABLE. I.

For Temperature of 15° C.		For Temperature of 20° C.	
Amount of water (in cc.) displaced by nitrogen generated from 2 cc. urine.	Corresponding amount of urea (in grammes) per 1000 cc. of urine.	Amount of water (in cc.) displaced by nitrogen generated from 2 cc. urine.	Corresponding amount of urea (in grammes) per 1000 cc. of urine.
1	1.281	1	1.261
2	2.562	2	2.522
3	3.842	3	3.783
4	5.124	4	5.044
5	6.404	5	6.305
6	7.686	6	7.566
7	8.967	7	8.827
8	10.248	8	10.088
9	11.529	9	11.349
10	12.810	10	12.610
11	14.091	11	13.871
12	15.372	12	15.132
13	16.653	13	16.393
14	17.934	14	17.654
15	19.215	15	18.915
16	20.496	16	20.176
17	21.777	17	21.437
18	23.058	18	22.698
19	24.339	19	23.959
20	25.620	20	25.220
21	26.901	21	26.481
22	28.182	22	27.742
23	29.463	23	29.003
24	30.741	24	30.264
25	32.025	25	31.525
26	33.306	26	32.786
27	34.587	27	34.047
28	35.868	28	35.308
29	37.149	29	36.569
30	38.430	30	37.830

---

[1] Graduation Thesis.

stopper connected with the burette as above stated was crowded in tightly. The connection was then complete. The water in the burette was brought to 0 cc. by pushing in or drawing out the glass rod in the rubber stopper. The urine and hypobromite of sodium were then allowed to mix, and after effervescence ceased the number of cc. of water in the burette displaced by the nitrogen generated was noted. The temperature of the water was then taken, and the amount of urea in the whole quantity of urine tested was estimated by Table I.

I first tried the coca towards the end of the summer of 1881. My diet was the same every day during the continuation of the experiments, and consisted of bread, milk, roast beef, and coffee. I made but few trials at that time. The mode employed was to do a certain kind and amount of work in a definite time one day without, and another day with, coca. I think I did not take enough of the leaves (which were not first quality, I suspect) at a dose. I did not experience much effect from the drug. However, as I noted the results I will subjoin them: —

TABLE II.

HOURS.		AMOUNT OF URINE.		UREA.	
With Coca.	Without Coca.	With Coca.	Without Coca.	With Coca.	Without Coca.
4	-	265 cc.	-	4.4 grms.	-
-	4	-	260 cc.	-	4.64 grms.
24	-	785 cc.	-	20.00 grms.	-
-	24	-	675 cc.	-	22.44 grms.
12	-	680 cc.	-	8.65 grms.	-
-	12	-	700 cc.	-	9.02 grms.
12	-	540 cc.	-	9.42 grms.	-
-	12	-	400 cc.	-	9.04 grms.
6	-	345 cc.	-	5.99 grms.	-
	6	-	340 cc.	-	5.38 grms.
		2565 cc.	2375 cc.	48.46 grms.	50.88 grms.

Leaving out of account the two days when I estimated the urea for the whole day, the results almost exactly balance. I think the coca had no effect to speak of, and only put in this table to show the average amount of urea passed.

The second series of experiments began about the middle of October, 1881, and lasted for nearly two months. The form of exercise taken was walking. The same route was walked over in the same time, first without and then with coca. Through the kindness of Prof. R. T. Edes I obtained the leaves direct from Parke, Davis & Co., of Detroit, Mich. They were much stronger and fresher than the leaves I had been using previously. I took a larger quantity (twenty to thirty grammes) at a dose than before, and felt the effects heretofore described. I took these walks on Saturday afternoons, with the exception of the two twenty-two-mile walks. These I took from 10.30 A. M. to five P. M., eating no food during the walks. It gradually grew colder, and the effect of this is shown in the gradually increasing amount of urea. This is very marked in the last two walks that I took in this series, one being with coca and the other without.

The walks were each eleven miles, and occupied only three hours, but the excretion of urea was considerably above my average. The thermometer stood at the freezing point on both these walks. I give the results in Table III.

TABLE III.

(1.) *With Coca.*

Hours.	Miles.	Amount of Urine.	Amount of Urea.
4	16	180 cc.	3.54 grammes.
6.5	22	300	5.15
3.5	13	350	3.80
3	11	234	4.25
3	11	255	5.20
20	73	1319 cc.	21.94 grammes.

(2.) *Without Coca.*

Hours.	Miles.	Amount of Urine.	Amount of Urea.
4	16	420 cc.	5.52 grammes.
6.5	22	315	6.73
3.5	13	292	4.10
3	11	220	4.62
3	11	286	5.55
20	73	1533 cc.	26.52 grammes.

Computing from this table, we find that with coca the excretion of urea per mile is .300 gramme, per hour is 1.097 grammes, per 100 cc. of urine is 1.66 grammes; without coca the excretion of urea per mile is .363 gramme, per hour is 1.326 grammes, per 100 cc. of urine is 1.73 grammes.

Before proceeding to draw any conclusions I will give the results of the third series of experiments. This series extended from March 14 to May 1, 1882: —

TABLE IV.

(1.) *With Coca.*

Hours.	Miles.	Amount of Urine.	Amount of Urea.
2.75	11	152 cc.	2.85 grammes.
2.5	10	104	2.75
2.5	10	146	2.75
2.5	10	120	2.40
2.5	10	230	3.80
2.5	10	212	3.46
2.5	10	166	2.90
3	8	210	3.49
3	10	210	3.83
3	12	210	4.10
3	14	200	4.74
2.5	10	186	3.84
2.5	10	170	2.67
3.5	15	250	4.99
3.5	15	256	4.56
4	16	310	5.25
9	31	272	5.50
2.5	10	354	3.12
57.25	222	3758 cc.	66.50 grammes.

(2.) *Without Coca.*

Hours.	Miles.	Amount of Urine.	Amount of Urea.
2.5	10	160 cc.	3.70 grammes.
2.5	10	220	3.30
2.5	10	135	2.86
2.5	10	110	2.00
2.5	10	155	3.10
2.5	10	218	3.00
3	8	272	4.16
3	10	250	4.46
3	12	232	4.45
2.5	10	260	4.39
4	16	460	5.59
2	8	90	2.27
3.5	15	330	5.08
3	10	230	3.80
4	16	285	5.13
3	10	185	3.40
2.5	10	258	3.31
48.5	185	3850 cc.	63.94 grammes.

Comparing (1) and (2) we find that 222 miles walked while under the influence of coca caused an expenditure of 66.5 grammes, while 185 miles walked without coca caused an expenditure of 63.94 grammes of urea. Computing from these figures we find that with coca the excretion of urea per mile is .299 gramme, per hour is 1.161 grammes, and per 100 cc. of urine is 1.769 grammes, while without coca the excretion of urea per mile is .345 gramme, per hour is 1.318 grammes, and per 100 cc. of urine is 1.660 grammes.

If we compare these results with those obtained in the same manner from Table III. the almost exact correspondence of the excretion of urea per mile with coca in both series is, to say the least, quite striking, in Table III. being .299 gramme, and in Table IV. .300 gramme. The excretion per mile without coca corresponds pretty closely, and the same may be said of the excretion per hour without coca. With regard to the excretion per hour with coca, Table IV. exceeds Table III. by .064 gramme, and the excretion per 100 cc. of urine in Table IV. is diametrically opposed to that in Table III.

What conclusions, then, are we justified in drawing from the figures before us? That less urea was excreted when coca was used than when it was not used is undeniable, but that this decrease is due to the effect of coca seems to be somewhat questionable. Looking at Tables III. and IV. we see that more urine is passed when no coca is used than when it is used. This is especially noticeable in Table IV., where the total amount of urine passed in 48.50 hours' walking, without coca, exceeds by 92 cc. the amount passed in 57.25 hours' walking with coca. Increase in the amount of urine causes the amount of urea to increase absolutely, and diminish relatively. Coca does not seem to prevent this to any great extent, though it does somewhat, I think. When walks were taken on cold, damp days both the amount of urine and the urea were increased, but generally less increased when coca was taken than when it was not. Atmospheric conditions seem to stand in the way of coming to any definite conclusion, yet some of my walks, with and without coca, taken under atmospheric conditions as nearly alike as was possible, lead me to believe that coca does have an effect on the urea excretion, and, furthermore, the very close correspondence of the excretion of urea per mile with coca in Tables III. and IV. strengthens this belief. I am at a loss to explain the cause of the excess of urine when not using coca. I am not aware that the days when I took walks without coca were to any extent colder or damper than other days when I used coca. Possibly coca has some diaphoretic effect, but I never noticed any, or perhaps it acts upon the kidneys in such a way as to diminish the excretion of water.

There is one thing pretty certain to my mind, and that is that coca is an excellent thing, in every respect, for a long walk. On Saturday, April 29th, I took the thirty-one-mile walk recorded in Table IV. It took me from nine A. M. to six P. M. I did not hurry at all, and walked the whole with perfect ease. I had no desire for food during all the time, and could easily have gotten along without any supper. In the evening I walked four or five miles more. I took thirty-two cc. of fluid extract of coca in two doses, and chewed about twenty grammes of leaves for this walk, and to the influence of the coca I attribute the ease with which it was accomplished. Now, as regards the urea in this case. The amount of urine was very small (272 cc.), yet at that rate over 700 cc. would be passed in 24 hours, an amount not much less (and even larger) than I passed at times during 24 hours while experimenting last August. Yet the amount of urea then was at least 20 grammes for the 24 hours, while at the rate at which it was excreted during my nine hours' walk it would have amounted to less than 14 grammes in 24 hours. I know of no cause for such a marked diminution unless it was the coca. Surely going without dinner could not cause it. I regret that there have been no more opportunities for these long walks. I am convinced that excellent results would follow the trial of it in this way.

My experiments with coca have not come to as much as I had hoped; still I have had the satisfaction of demonstrating to myself the practical value of coca. It has had a good effect upon me both mentally and physically. It has almost always produced exhilaration, and without exception has prevented fatigue. Hence in conclusion I will say that I am pretty well convinced that, in my own case at least, the ease with which walking has been accomplished by the aid of coca is attributable to the united action of two effects of coca. One of these effects is stimulation of the nervous system, the other is the retardation in some way of the process of metamorphosis, so that work is done with a less expenditure of force with than without coca. Although no positive conclusion has been arrived at in this paper, yet the results of the few experiments I have undertaken seem to point to the usefulness of coca, and hold forth inducements to prosecute the investigation.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

THE BRAIN AND ITS MEMBRANES.[1]

THE scarcity of material for a report induces us to press into service Mr. Lewis s book, which deserves perhaps a separate notice. It is a reappearance of a number of separate papers that were published in *Brain*, on macroscopic and microscopic methods of research. The directions for microscopic work are very minute, and show that the author is not only very deeply read in the matter, for he gives the methods of very many authorities, but that he can give also the results of personal experience. We find nothing that it seems appropriate to quote, and refer those interested to the original papers. One or two points of the coarse anatomy may be mentioned.

The first relates to the membranes, and is interesting in connection with Dr. Tuke's paper. It is curious how diverse views are still entertained concerning the arachnoid. Mr. Lewis, although describing the so-called parietal layer as simply a layer of nucleated polygonal epithelium lining the dura mater, nevertheless speaks of a space intervening between it and the dura which he apparently accepts on the authority of Key and Retzius. Even if such a space can be demonstrated with the microscope we should be unwilling to speak of it as one of the "great" cavities, of which Mr. Lewis gives four as follows: —

---

[1] The Human Brain. Histological and Coarse Methods of Research. By W. Bevan Lewis, L. R. C. P. London: J. and A. Churchill. 1882. [Sent to the JOURNAL for review.]

Atlas d'Anatomie Topographique du Cerveau et des Localisations Cérébrales, par E. Gavoy, Medécin Major de 1re classe des Hôpitaux Militaires. Octave Doin, Paris, 1882.

Sur la valeur de la taile et du poids du corps comme termes de comparaison entre la masse de l'encéphale et la masse du corps; par M. L. Manouvrier, and the discussion of this paper. Bulletins de la Société d'Anthropologie de Paris. Tome v. (3rd série) 1re fascicule, January to March, 1882.

Note on the Anatomy of the Pia Mater, by Dr. J. Batty Tuke. Edinburgh Medical Journal, June, 1882.

"(1.) The subduralraum betwixt dura mater and the parietal arachnoid.

"(2.) The arachnoid cavity formed by the arachnoid sac.

"(3.) The subarachnoid cavity betwixt visceral arachnoid and pia mater.

"(4.) The epi-cerebral space between pia mater and cortex."

The so-called parietal layer of the arachnoid has had but a doubtful existence for a long time, and the term subdural space has generally been applied to the space beneath it, formerly the arachnoid cavity. Dr. Tuke goes further still, and disputes the existence of the visceral layer, which lies outside of the pia and bridges over the sulci without following the pia mater into them. He bases his views on microscopic sections of the brains of men and monkeys which, to quote his own words, show "that over the curved surface of each convolution a membrane exists investing it closely. This membrane, the pia mater, consists of two layers of a distinctly fibrous character, for the most part bound together by connective tissue so intimately as to be inseparable, and to give us every right to consider it as one membrane. *Between these two layers and in the connective tissue the vessels permeate. No membrane external to this exists except the dura mater.* But when this investment approaches a sulcus the two layers separate, the outer bridging the fissure, the inner dipping into it. . . . In the angular space thus formed the arteries lie naked, or at most are supported by very fine fibrous trabeculæ; but as they enter the brain substance they receive from the investing layer fine hyaline sheaths." Dr. Tuke admits that these two layers are much less closely connected over the cerebellum, and that they are quite distinct around the spinal cord; still he insists that the outer is clearly continuous with the outer layer of the pia mater. Thus he arranges the membranes and spaces as follows: The dura mater, the subdural space, the pia mater, and the intra-pia-matral (*sic*) space or spaces. It is evident that, if we give up the parietal layer of the arachnoid, much of this appears at least to be merely a matter of nomenclature, and that it would do as well to say that the arachnoid and pia mater are closely united on the summits of the cerebral convolutions. Dr. Tuke, however, thinks that his views are important as giving an explanation of the openings of the peri-vascular lymph spaces around the vessels that penetrate the brain. He dismisses Boll's theory that they open into a space below the pia mater, on the ground that it is impossible, as their walls come from the pia mater itself. He objects, if we mistake not, to the view that they open into the subarachnoid space on the ground, first, that there is no such space (which, if true, is sufficient alone), and next, that they could not pass through the pia mater. It seems to us, however, that he is begging the question by adopting his own definition of the pia mater. Granting that the sheaths come from the pia we see no difficulty in conceiving that the peri-vascular spaces open on its outer surface. According to Dr. Tuke, they open into the intra-pia-matral spaces, but we do not feel sure that this is not practically the same thing.

Mr. Lewis gives the following method of obtaining the cranial capacity, which is a modification of one used by Dr. Hack Tuke. The *calvarium* being removed, a hole is trephined in the frontal bone and a wedge-shaped piece cut out of the occiput. The foramina are plugged with clay, which is also put into the cut made by the saw; when the skull-cap has been replaced it is secured by several turns of a bandage covered with clay. Paraffine is poured in through the hole in the frontal bone, which makes a beautiful cast, and does not shrink on hardening as plaster-of-Paris and white wax both do. When it is hard the top is again taken off, and the wedge-shaped piece cut out of the occiput is also removed to give a chance to press the cast out gently from behind. The cranial capacity is obtained by measuring the mould by displacement.

We now take up the question of the significance of the weight of the brain and, of course, the influence of disturbing conditions must not be neglected. Mr. Lewis quotes Bastian for the following: (1) Length and nature of illness; (2) mode of death (vascular engorgement favoring high weight); (3) certain neuroses, as epilepsy; (4) all conditions, including sclerosis; (5) atrophy; (6) congenital micro or megalocephaly. He then continues: "The student must also take into consideration the relationship between weight of brain and the *age* and *sex* of the individual as well as the *weight and height of body.*" How delightfully vague all this is will appear presently.

Gavoy's Atlas, without having much that is new in it, might very fairly have a more ambitious title, for it is a handsome book giving a *résumé* of recent studies of the brain and skull, localizations, the topography of the convolutions, their relations to the skull, etc. Gavoy writes as follows: "By counting only the largest skulls of each race, those, that is, that exceed a certain fixed mean, as M. Le Bon has done, we find that the superiority of one race over another is characterized by a greater number of large skulls. But this particular fact, as it may vary with the group of skulls examined, cannot serve as a basis to establish the superiority of one race over another and the degree of intelligence which distinguishes them. We must, then, conclude that craniometry is as yet inadequate to determine the relative degree of intelligence of different races or individuals, and that with regard to its functions the quality of the cerebral substance is more important than its quantity."

The discussion at the *Société d'Anthropologie* is curious as showing that the great complication of the problem is being in some degree acknowledged, and is made more interesting by the feeling which appears to exist among different members. It began by a paper read by M. Manouvrier on the 2d February last, in which he pointed out, what by the way is sufficiently clear, namely, that the height alone is a very unsatisfactory index of the volume of the body. Short men are apt to be stouter than tall ones, and again, a difference of say an inch in the height of two lean men is of less consequence (as representing the bulk) than between two stout men. M. Manouvrier pointed out that in spite of the inexactness of the height as a guide, several authors had taken it as a basis of calculations to show the effect of the size of the body on the weight of the brain. He considers the weight of the body a better standard than the height, though he admits that it is far from satisfactory; indeed, after long diseases ending in death it must be more variable than the height. M. Manouvrier was also very severe on M. Le Bon's conclusions and methods, and though he did not mention him by name, referred to him unmistakably. One passage may be quoted which shows among other things that some of the members appear to make their criticisms with a directness that leaves no place for politeness: "One result of forgetting the elementary considerations that I have just recalled has been the appearance, in recent years, of assertions as little scientific as the following: 'Woman tends to become more and more different from man in regard to the size of the brain *and consequently in intelligence.*' The author of this assertion, which has been reproduced a thousand times in various works, would certainly never have made it had he understood better than he did the value of the factor height as a term of comparison between the size of the brain and the size of the body, if he had taken into account the means in Broca's register instead of only some of them, and, finally, if he had considered the sexual difference in the height according to race."

Manouvrier, however, does not consider all existing work valueless, but thinks that it has been shown that the absolute cerebral weight increases with the size of the body, and that the relative cerebral weight decreases with the increase of the latter. By way of obtaining greater accuracy he suggests that hereafter when the brain is weighed not only the height should be measured, but also a measure of the breadth should be taken, which would not be influenced by the amount of fat, and recommends for this the distance between the acromions. He thinks it would be well also to take the distance of the top of the sternum from the spine of the first dorsal vertebra. Notes should be taken of the strength and usual vigor of the individual, and when possible, a humerus and a femur should be kept together with the skull and brain. These bones were to be kept to serve as bases for a new standard of the size of the body, of which more details are promised.

M. Le Bon did not appear to be pleased with the paper; for when it was concluded he remarked that M. Manouvrier's theoretic reflections were without value in the presence of facts, and that they did not affect the statements of the relations between the height and the weight of the brain that had been published. He intimated, moreover, that it was more of a job than M. Manouvrier appeared to be aware of to get the size of a body by calculation.

M. Manouvrier replied, and brought up a new charge about the relation of the circumference of babies' heads to their weight in the two sexes, and concluded by asserting that M. Le Bon by a wrong method had arrived at false results, namely, that boys' heads are relatively larger. He pointed out that M. Le Bon had left out two cases in which the child's weight was particularly small, and one in which it was very large, but yet had left in one very large boy who had a large cranial circumference.

M. Le Bon replied that it seemed evident to him that it was M. Manouvrier whose conclusions were contrary to truth, but he reserved his reply for the next meeting.

M. Pozzi continued the discussion. He mentioned that recent researches had shown that not only the optic thalami and corpora striata but also the surface of the brain had a direct effect on the muscles. The brain, therefore, is the organ of thought, and at the same time, much more than had been supposed, an organ regulating motion, so that it is logical to believe that its weight would have some relation with muscular development. As a comparison to the weight of the brain he suggests the weight of the great pectoral muscle and that of the superficial muscle of the calf, which indicate very fairly the development of their respective limbs. He, moreover, would have them taken from subjects of not more than average intelligence, so as to avoid the "disturbing influence of this element."

M. Manouvrier thought that there was no great difference between M. Pozzi's views and his own. He thought, however, that the changes muscles may undergo, both before and after death, make them less desirable than bones, and he prefers, therefore, the weight, or, better still, the volume (to be obtained, we presume, by displacement) of the humerus and femur.

M. Parrot then alluded to a new standard of comparison. He said that wishing to record not the absolute but the relative weight of brains he had sought for such a standard, and had rejected both bones and muscles, as he thought both gave too varying results. So he turned his attention to the visceral system, and chose the heart, which he says varies as little as the brain, and, in spite of the usual phraseology, is the most "brutal" of all organs. What he can possibly mean is not evident, for every one knows that no organ of the body so quickly reacts to the emotions of the soul. Neither do we feel much confidence that, as M. Parrot claims, the relative weight of the brain to that of the heart will give us the most exact measurement of the respective influence of intelligence and of muscular development (*motricité*) on the former organ. He calls this the cephalo-cardiac index, which is calculated by ascertaining how many grammes of brain there are for every ten grammes of heart.

The discussion was resumed a fortnight later, and M. Topinard began by speaking of the register of weights and measurements kept by Broca. First of all, however, he detailed the method of weighing the brain which Broca was accustomed to follow. After allowing ten minutes for the fluids to run off, the whole encephalon was weighed, and then each of the chief divisions — the cerebellum, the medulla, the pons — was weighed separately. The membranes were then removed, which, together with the escaping serum, were kept apart, and then each lateral half of the divisions above mentioned, and also of the frontal and other lobes, was weighed separately. As may be imagined by those who know how great a worker Broca was, the number of cases observed is very great. According to M. Topinard they throw light on four questions, the age, the sex, the height, and individual variations. The deductions concerning the age are very curious. The groups of brains from persons of fifteen, twenty, and twenty-five often have a mean weight greater than at subsequent periods, but as it is hardly possible to imagine that the brain has already reached its maximum at twenty, some explanation must be sought for. Broca thought that the mortality at this age occurs chiefly among those whose brains have grown "rapidly and violently," and thus that the high means are accidental. The next important phase is from the age of thirty to thirty-five, at which in both sexes the brain usually attains its maximum weight. After this the weight decreases, and after sixty or sixty-five the decrease is more rapid. The weights of brains of from forty-five to sixty years offer some contradictions and irregularities, for which the following explanation is offered. At this period death is most active among brains at the two extremes, that is, those which are the most developed, and those which have made the greatest progress in their course of atrophy. We must at this point anticipate a criticism we had meant to reserve till the end, to remark that, after all, these explanations seem to be entirely without any rational basis, and, indeed, are little else than arbitrary assertions used to explain away perplexing facts.

The results of the comparative weight of the brain in the two sexes at the different ages are rather curious: —

Age.	Difference, in Grammes.
25 to 35	202
35 to 45	178
45 to 55	151
55 to 65	140
65 to 75	102
75 to 85	166

Thus we see a steady diminution from youth to old age of the difference in weight in favor of the male brain. M. Topinard did not state whether the exception in the last stage was due to the relatively small number of brains weighed. He then went on to say that woman, being smaller than man, has necessarily less brain, and consequently instead of comparing absolute weights we should compare the relative weight of the brain to the height in the different sexes.

With regard to the height, he found that the tallest people had heavier brains absolutely but not relatively. He concluded as follows: "If we take men and women of corresponding height, that is to say, if we eliminate the influence of height on the weight, and then separate the large brains, those above 1450 grammes for men and 1300 for women, and then compare the totals in each, we find that 20.1 per cent. of the men have brains weighing more than 1450 grammes, and 11.3 per cent. of the women have brains above 1300 grammes, which appears favorable to the statement that a smaller number of women than of men have brains above the average."

M. Le Bon and M. Manouvrier then took up the discussion, chiefly on the accuracy of the former's calculations. We shall not go into the details, which are none of the clearest, but we cannot help quoting a remark of M. Le Bon's on the use, or rather the abuse, of statistics. He accuses his adversary of reasoning like a man who, wishing to state the comparative wealth of the inhabitants of a French and of an Irish village, trusts solely to averages. In the former village he supposes that every one has a little fortune of four or five thousand francs, and that in the latter there is one millionnaire to ninety-nine paupers. Common sense, he says, will tell us that the former are the better off, but simple averages will show the contrary. He is, we think, however, unjustly severe on the measurements which M. Manouvrier would have to supplement the height. He insisted that male children have both absolutely and relatively a greater cranial circumference than female.

It cannot be said that any very valuable results can be traced to this discussion, or that it is probable that the very laborious studies of able men are apt to solve it if they are continued solely on the present basis.

A CORRECTION. THE POSITION OF THE STOMACH.

In our last report[1] we referred to a paper by Professor Lesshaft on the position of the stomach, which was read at the International Congress last summer. The reports that we then had were but meagre and apparently incorrect. We wrote that in the discussion which followed the reading of the paper "Professor Allen Thompson thought that the stomach was situated almost transversely," and that "several other anatomists were of the same opinion." In the official report we find that Dr. Thompson said that like many others he had described the position of the stomach as too completely transverse. He thought it would be more correct to describe the main axis as placed obliquely.

Reports of Societies.

STATED MEETING OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

First Thursday of February, 1882. William G. Wheeler, M. D., president, in the chair. A. P. Clark, M. D., read by appointment, a paper upon

REMOVAL OF INTRA-UTERINE FIBROIDS,

of which the following is a digest: —

Case. Mrs. P., thirty-six years of age, native of Illinois, strong, well developed, accustomed to out door pursuits, skilled also in use of fire-arms, and proficient in hunting, etc. By a former marriage had had three children; remained a widow two years; had lived with a second husband three years, during which time had never been pregnant. For past year had suffered from pain in the pelvic region and observed considerable catarrhal discharge; menstruation painful; very nervous, and her husband asserted at times delirious; betrayed signs of hysteria; would be quiet for a time and then be suddenly seized with severe suffering; no elevation of temperature, and but slight acceleration of pulse; required frequent doses of opium, but chloral hydrate rather increased her excitement; often vomited, but gave no signs of disease of stomach or liver; urine normal; vaginal examination disclosed an abundance of thick, stringy mucus escaping from os, os patulous but without evidence of laceration, uterus enlarged and somewhat retroflexed.

Patient continued to suffer, and under occasional observation, until July of last year, when the doctor was so fortunate as to get hold of a growth from above and drew down somewhat within the cervix, and this without necessity of dilating. Next morning patient reported herself more comfortable than for weeks before. With Dr. Keniston's assistance, she was etherized and placed in Sims' position. Conjoined pressure externally over the fundus brought the tumor down into position, speculum was dispensed with, and firm pressure was all that was required to expose cervix for operation. A finger was now passed into the uterus around the tumor, to determine its nature and size. The growth was found to fill the uterine cavity completely, and it was with much difficulty that the fundus could be reached. It proved to be very hard and densely fibrous, and removable only by dragging down with forceps and cutting to pieces with curved scissors. After entire removal, uterus was found to present a long diameter of four and a half inches. Very little blood lost during operation. Uterus was then washed out with warm carbolized water by means of a fountain syringe. Patient recovered without untoward symptoms and with but the slightest constitutional disturbance, so that by the latter part of the same month she was able to resume control of her household. After this, had a sudden chill, followed with considerable purulent discharge; whereupon she speedily regained her strength and considers herself in good health.

---

[1] March 9, 1882.

Emmet remarks in his recent work that he was the first to use scissors for cutting away fibroids, — we shall see reason to doubt this statement later, —although scissors had been previously used in France and Germany for dividing the pedicle of a polypus. This was in 1863, and since then his method has become general. But there is one danger in this mode of operating, namely, of inversion of the uterus; and this especially towards the close, when the operator is anxious to remove the entire growth up to its attachment. The organ is the less able to resist the traction exerted upon it because of the atrophy and degeneration its walls have undergone. Such accident might imperil the life of a patient, already somewhat exhausted. When it appears imminent, when the fundus begins to assume a thimble or cup-like shape, it is better to leave behind a portion of the tumor, trusting that the residuum will slough away and be discharged. Such necessity was first impressed upon the reader in a case in which he assisted.

Emmet hardly refers to this danger, but reports a case wherein inversion was beneficial, as enabling him more effectively to remove the mass. But this is offset by reports of other cases, two of which were fatal.

The diminished suffering and comfortable rest the patient enjoyed the night after the tumor was drawn down — in the case reported — are explained by the diminished blood supply occasioned by the traction. A case by H. W. Jackson, Esq., is reported in *Braithwaite*, 1881, of spontaneous expulsion of three large fibroids. He remarks: "Continued expulsive efforts arrested the circulation of blood in the tumors and their death and consequent extrusion followed as a necessary consequence."

Instead of scissors, Thomas, of New York, and Simpson, of Edinburgh, have each recommended a curette of their own make, respectively, for cutting through fibroids of sessile base. Such instruments have been greatly multiplied and are all more or less dangerous; too often they but meet an imagined demand of the enthusiastic inventor. Allusion to Dr. Robert Greenhalgh's olive-shaped cautery for interstitial fibroids and brief consideration of the ætiology of fibroid growths followed.

Atthill, in 1874, reported a case of ovoid fibroid of the anterior wall of uterus, of the size of a hen's egg, removed by the galvanic knife, — the knife consisting of a coil of platinum wire one half inch in length, connected with a galvanic battery. The operation was tedious, as the tissues were vascular, and the flow of blood was sufficient to cool the wire on each stroke of its cutting edge. Cauterization controlled all hæmorrhage except from two vessels which had to be ligated. Cicatrization of the stump was slow, and the uterus afterwards assumed a globular form. The smell from the slow cauterization was most disagreeable; and the reporter considers that the advantage accruing from diminished risk of hæmorrhage was more than counterbalanced by these objections.

The écraseur was formerly more in use than now. The reader briefly discussed its more prominent characteristics.

William Ross Jordan, in 1873, reported two cases of removal of large fibroids by enucleation. The cervix was first dilated and an exploratory finger then passed; the cervix was divided by scissors, and the tissues between the uterine wall and the tumor were separated; an incision into the lowest and most prominent part of the growth was made by a bistoury. Subsequent removal was aided by ergot and traction exerted by vulsellum forceps. Condy's liquid freely used. Time required for completion of the operation several days.

Protheroe Smith, writing in 1872, says when the fibroid mass is projected into the uterine cavity, covered only with membrane, and when it becomes polypoid, it can easily be removed by ligature, écraseur, or scissors. When the tumor is sessile in form and distinct from the structure of the uterus, the cervix may be dilated, and the mass enucleated piecemeal by ligature or écraseur. This plan he had followed for more than seven years, which carries the operation by scissors as far back as 1865 — two years after Emmet's claim to have first so applied them. But as Smith says his method extended back farther than seven years, it may be doubted whether Emmet was actually the first thus to use the scissors. At all events, Smith was much in advance of the gynæcologists of his day in the treatment of fibroids, as to certain other details.

In 1868 McClintock thus enumerates the methods by which nature secures the expulsion of the fibroid. (1.) By interstitial absorption. (2.) Simple detachment or separation. (3.) Calcareous transformation. (4.) Sloughing or disintegration. (5.) Expulsion by uterine contraction. He also indicates three ways by which separation by detachment may be brought about. (1.) Pedicle may give way by simple atrophy. (2.) When pedicle is slender it may snap in the act of extrusion of tumor from uterine cavity. (3.) It may be destroyed by constriction on the part of os uteri or ostium vaginæ. Still, the tumor may be too large or dense for spontaneous expulsion, and here the surgeon must interpose to save the life of the patient. This he illustrates by reports of two cases.

Spencer Wells, in his Notes of an Autumn Holiday in America, relates, among other pertinent facts, that Atlee gave, as an internal remedy in fibroids, ammonium chloride in ten-grain doses, two or three times a day, for weeks or months together. He promised Spencer Wells that he would try calcium chloride, with a view to producing calcification of the nutrient vessels of these growths.

In 1840 Velpeau, and soon after Amussat, began to remove hard submucous tumors by a process termed enucleation; details of two such operations were given, the latter being done in 1859. In these the scissors were used, and thus it appears this instrument was used full four years before Emmet claims to have made the first use of them. Velpeau's method was afterwards modified by recourse to Simpson's gastrotome and otherwise, as detailed by the reader. Occasionally pregnancy had followed recovery from this operation.

The method of Duncan, published in 1870, was next described, resorted to when the discharge, serous, bloody, and purulent, was so profuse as to endanger life. This scheme, confessedly, had no claim to elegance or brilliancy.

In a case of Dr. Jas. Whiteford's, of fibroid complicated with vascular polypus, the growth was freely excised with a bistoury, and a solution of perchloride of iron injected into the uterus. A sharp metritis followed, but patient was soon better, and after six months the tumor was expelled with pains like those of labor, but more severe.

A case is reported in the Boston Medical and Surgical Journal, 1875, of a large fibroid presenting the appearance of the last month of pregnancy. Woman was too weak for operative procedure, but treatment by ergot and support was followed for some time, and finally a fibroid was discharged with a torrent of clear fluid. Good recovery.

Upon occasion of an interesting report of a fibroid by Dr. Wheeler, before the Medical Improvement Society, Dr. H. R. Storer remarked upon the lengthening of the uterine cavity occasioned by fibroids, a condition not often present in ovarian disease. Dr. J. B. S. Jackson observed that if a fibroid project outwardly towards the peritonæum, its growth may not cause enlargement of the uterine cavity, whereas an ovarian cyst, attached to the body of the uterus, will usually enlarge this organ. The fibroid is non-malignant. Dr. Tilt asserts that the microscope shows the tumor consists of fibrous tissue, with striæ of inorganic muscular fibre.

Among other exceptional cases the case of Dr. Bowditch was recalled, where a fibroid was discharged through the rectum, this having been accomplished by a process of adhesive inflammation, etc. The paper closed with dubious or unfavorable opinion expressed upon Hewson's "dry-earth" treatment, and the method by electrolysis.

[In the discussion following Dr. Clark's paper, A. P. Weeks, M. D., served as secretary *pro tem.*]

The CHAIR asked for experience of Fellows in the hypodermic ergot treatment of fibroids, stating that he himself had used it in several cases, but usually with negative results.

DR. WEEKS replied he had two cases under observation two years ago; one of the semi-elastic variety, with feel like that of cystic growth, of the size of a man's two fists, the other half this size, uneven, lobulated, and firm. Both patients suffered much from metrorrhagia, over which subcutaneous ergot exerted no power; indeed, it seemed to increase the flow in one case. A long veterinary needle was then procured, and injections of iodine made into the substance of the hard tumor, with good effect. Hæmorrhage diminished from thirty-five to ten napkins, and the tumor since then does not seem to have increased much in size.

DR. MARCY thought subcutaneous ergot of value in those cases only in which it could produce muscular contractions sufficient to constringe the vessels, or where the walls of the uterus can be brought into apposition to arrest hæmorrhage. In one case, seen in consultation, ergot thus used was without avail, but afterwards gave relief introduced per os. In review of the paper, he would say inversion is a point worthy of attention, but there is not so much danger of inversion from traction used as there is danger of opening the fundus, especially when the scissors are used. Dr. Thomas's curette is the safer instrument, especially as with it not so much tension is required, only enough to put the fibres on a stretch. Second. Galvano-cautery should be put out of the question, the more so as we are uncertain as to the amount of tension we use. Third. The development of fibroids is a question still *sub judice*. Their method of nutrition is very peculiar, for, as is well known, their nutrient vessels do not pass through the capsule to enter the growth, but, on the other hand, the growth receives its nutrition from the capsule. Fourth. Calcification, by administration of calcium, is one of the droll thoughts which have their origin in theoretical speculation. Fifth. Dry earth, applied after the manner of Dr. Hewson, is the work of an enthusiast, of a man who reasons upon insufficient premises. The speaker had himself operated upon a case, of curious history, since the last meeting. The woman had been subjected to Hewson's method for several months, and the fibroid was said to have been lessened one half in size. Coming under his own care, he performed *ovariotomy*, and removed a *multilocular ovarian cyst*. A careful examination of the pelvis revealed the fact that there did not exist a uterine fibroid, nor was there evidence that one had ever existed. Another large fibroid, which he had had under his inspection, went under the personal care of Dr. Hewson, and was said to be arrested or very much diminished after about a year's treatment. Had recently examined the patient, and, to himself, the growth seemed rather to have increased in size. The English treat fibroids in a far less heroic manner than we. They use ergot, resort to incisions, in a word, appear to temporize. Dr. Thomas's success by the rapid method has been exceptionally gratifying during the past two years.

DR. STORER also regarded Dr. Hewson's assertions the claims of an enthusiast. Misunderstanding or misrepresentation in respect of a case of his own had subjected him to annoyance. After the patient had been under the dry-earth treatment for a time, the report was widely circulated that a complete cure had been effected, even to the restoration of flexion, when in fact no more improvement was apparent than was fairly attributable to the efforts of nature. Still, Dr. Hewson's method may be worthy of trial in intractable cases. Dr. Storer had used potassium bromide with marked results, but the ammonium chloride, as advised by Atlee, had been wholly negative in its effects. Had applied the bromide in one case where there was marked enlargement of the anterior wall of the uterus, the patient taking it continuously for months. The growth lessened in size until it could no longer be perceived by external manipulation, and the patient dying some time after of another affection, a very small fibroid was found evidently undergoing a process of disintegration. He had always been of the opinion that ergot should not be used for its expulsive effect, but rather with view to produce local ergotism, dry gangrene, and degeneration. Fibroids should be divided into several classes: First, sub-peritoneal. These may not occasion much inconvenience, and are best left alone; they are very liable to shrink or shrivel after the establishment of the menopause. Second, purely interstitial. Third, submucous. If these be quiescent or slowly increasing and occasioning little annoyance, they are best left alone. The doctor further remarked that in his experience, with many physicians and many gynæcologists, he had witnessed very diverse schemes of treatment, and some that were of dubious value or positively baneful. In surgery of this nature he would especially emphasize the value of Listerism; doubtless cases have gone wrong that might have been saved had proper antiseptic measures been taken. He would remark, finally, it is better to let intra-uterine fibroids alone. Would cite an illustrative case: He once made an exploratory abdominal incision, and, finding a large fibroid tumor, advised letting it alone. Patient recovered, afterward married, and has lived fifteen years very comfortably.

Dr. W. S. Brown raised the question why it is that so many upon whom exploratory incisions have been made seem thereafter and thereby improved. He had had but little experience with ergot employed hypodermically, but had used it as a hæmostatic per os. A patient who had sub-peritoneal, lobulated fibroid was treated with ergot with marked success, in so far that it restrained the hæmorrhage, which was the chief difficulty. A year later electrolysis, after Dr. Cutter's method, gave such relief that for two years she was entirely free from metrorrhagia, but it has since returned. One case of interstitial fibroid, as large as an orange, was partly removed, since when there has been no hæmorrhage, and patient has been practically well. Was of the opinion that the wire was preferable to the chain écraseur, as it does not drag in so much tissue, and so is more manageable.

Dr. Storer, in reply to Dr. Brown's question, said the good effects of such instrumental interference were partly moral; a favorable influence was exerted upon both physician and patient, their mind was set at rest, etc.

Dr. Warner had observed that interference of various sorts was often followed by a diminution of the growth; how this was brought about we did not know. Had witnessed it in many instances. In one case, particularly, a large fibroid disappeared after the subsidence of a peritonitis induced by an attempt to dilate with sponge tents.

Hereupon a discussion followed upon the use, dangers, etc., of tents, in which Drs. Brown, Warner, and Marcy chiefly took part.

Dr. Marcy recalled a case of interstitial fibroid so large as seemingly to fill the entire pelvic cavity, very firm and immovable. Undertook its enucleation, but having made the abdominal incision, so severe hæmorrhage ensued he was forced to abandon the operation. The patient recovered, and now the tumor has very much diminished, and instead of being fixed can be turned freely in the cavity, and appears pediculated. It was not adherent.

Dr. Brown recalled that among Dr. Tait's *résumé* of one hundred and ten cases is the report of a case of a tumor of ten pounds' weight, which was caused to disappear by abdominal section, undertaken to remove ovaries. Tait condemns enucleation or removal except when the tumor protrudes from the os. The doctor further remarked that he had inferred from his reading that the English were afraid of surgical interference in extra-uterine and interstitial tumors, even though they presented at the os and lay in the vagina.

A MODIFIED CURETTE.

Dr. Marcy presented a modification of Dr. Thomas's curette, having a fenestrum in the bowl, through which the end of the finger may be passed, to serve as more rational guide for the instrument.

The society then went into executive session, after which it adjourned.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

The sixth annual Congress of the American Dermatological Association met at Newport, on August 30, and the two following days, holding two sessions daily.

ANNUAL ADDRESS.

The President, Dr. J. **Nevins Hyde**, of Chicago, in his annual address reviewed the progress of five years, and congratulated the members upon the present prosperity of the Association; he also called attention to the number and value of the contributions made during its brief existence by the Society to the province of dermatology, analyzing and classifying the papers presented, and stated that the statistics of the Society are based upon no less than sixty thousand cases of skin disease recorded by competent observers, members of this Association. In conclusion, he offered several suggestions with a view of adding interest to the annual meetings. He recommended that some prominence be given upon the programme to the exhibition of specimens, mounted sections, medicinal substances, drawings, etc.; that a clinical portfolio be opened to receive memoranda of interesting observations of not sufficient importance to be regularly announced; that a standing committee be formed to obtain information upon certain specified subjects; and, finally, that steps be taken towards increasing the membership of the Association.

MYXO-ANGIOMA OF THE SKIN. — DERMATITIS PAPILLARIS CAPILITII.

Dr. C. **Heitzmann** presented a communication entitled Studies on Myxo-Angioma of the Skin; Clinical and Microscopical.

He stated that this disorder was purely local and was very common, being found often on what are considered to be healthy persons. It has been improperly called *teleangeiectasis*, which simply means dilation of vessels, but this is actually a new growth of vascular tissue, and hence forms an *angioma*. A characteristic feature is that upon pressure the blood is emptied from the vessels, which afterwards refill; in children they get quite dark during a crying spell, some are of a bright red, others of a more venous character. They are very rarely congenital, except those of a warty character. They may be stationary or growing, painless or tender, rarely ulcerating, but occasionally serious hæmorrhage may occur in this way. Billroth describes three varieties (1) in the superficial layers of the skin, with much development of the capillaries, *simple angioma*; (2) where the glandular elements are involved, *lobular angioma*, and which may be composed almost entirely of capillaries, but may have also much arteriole structure; and (3) *cavernous angioma*, which is nearly all venous, the structure imitating that of the corpora cavernosa. When a section was examined microscopically it was found that surrounding the vessels were free nuclei, homogeneous basis substance and granular matter, presenting the characteristics of the *myxomatous* form of new growth, in which have been developed a number of new blood-vessels, produced by sprouting from the walls of the old capillaries, which at first are solid, as pointed out by Stricker, and afterwards become hollowed out.

Dr. **Hyde** read a paper on Dermatitis Papillaris Capilitii, in which he spoke of a peculiar form of papillary eruption, usually occurring at the back of the neck near the junction of the scalp. The patches are raised, distinctly circumscribed, not discolored, nor decidedly painful, yielding to pressure; they may be as large as the palm of the hand. Puncture affords exit to a considerable amount of purulent fluid followed by a mucoid material tinged with blood; after removing the contents the cavity slowly fills again with bloody fluid, and thus may be several times emptied in succession. The affection is very slow in its course, is decidedly papillary at its beginning, and involves the deeper structures of the skin, the epidermis escaping. It seems like a form of folliculitis, closely resembling "kerion," but is not parasitic.

These papers were freely discussed by the members, and other cases cited in illustration of the latter disease, which by some was attributed to irritation, as by a coarse collar, an explanation which was not admitted by the author.

PSORIASIS.

In the evening session Dr. R. W. Taylor read some Notes on Psoriasis, in which he referred to the statement of Wilson that this disease was an outgrowth of hereditary syphilis, and referred to a number of cases in which he had found this taint; in about twenty-five per cent. of the patients coming under observation he was able to trace syphilis in the family. He asked other members to pursue this inquiry, and report their observations.

Dr. White said that he could not see more than a coincidence of the two diseases in the case referred to, and thought that an equal number of patients with eczema or other disease, from the same station in life of the cases of psoriasis, would give an equal percentage of syphilitic antecedents. Psoriasis does not protect against syphilis, nor does the latter influence the course of the former, which, moreover, is not cured by anti-syphilitic treatment. These views were generally concurred in by all who discussed the question.

Dr. George H. Rohé reported Two Cases of Acute General Psoriasis following Vaccination. One case was that of a physician, twenty-eight years of age, who had never previously suffered from any skin affection nor from syphilis. After an unsuccessful revaccination with bovine virus, last January, the punctured spot became scaly, very itchy, and reddened. In the course of the following two weeks the entire body, except the palms of the hands and the soles of the feet, became covered with small, red, scaly papules, which rapidly enlarged at their border, the eruption being more profuse on the outer aspect of the arms, thigh, and back and front of the trunk. The itching gave great annoyance to the patient. Arsenic only aggravated the affection, which yielded in three weeks to warm alkaline baths, with fluid extract taraxacum and acetate of potassium given internally. The second case was that of a boy of nine years, who, three weeks after being successfully vaccinated with bovine virus, developed general psoriasis, which yielded to Fowler's solution.

CALX SULPHURATA.

Dr. Henry G. Piffard read a paper on Calx Sulphurata, in which he recalled the recommendation of Ringer as to the use of sulphide of lime in acne, and indorsed it. He attributed the variable effects reported by different observers to the great difference in composition. Some specimens obtained from druggists contain no sulphide of lime. He recommended small doses (one hundredth to one fifth grain) given frequently, in preference to the larger doses usually given.

OFFICERS AND PLACE OF MEETING.

At the business meeting held before the general session the following nominations were made: —

Officers for the ensuing year: — President, Robert W. Taylor, of New York; Vice-Presidents, I. E. Atkinson, of Baltimore, and A. R. Robinson, of New York; Secretary, A. Van Harlingen, of Philadelphia; Treasurer, Geo. H. Rohé, of Baltimore.

Time and place of meeting. — Lake George, on the Wednesday nearest the first of September, 1883, and the two following days.

This was unanimously adopted at the meeting on the following day.

(*To be concluded.*)

Recent Literature.

The Psychology of the Salem Witchcraft Excitement of 1692 and its Practical Application to our own Time. By George M. Beard, M. D. New York: G. P. Putnam's Sons. 1882.

The object of the writer and the contents of this little book are best stated by the following extract from the preface: —

"Great trials of this kind are landmarks of human non-expertness; measures of the cerebral force of nations; they tell us how low we stand, how slowly we advance; they are educators of the future, and may most wisely be studied in scientific detail by the psychologist and philosopher. There are times in the evolution of delusions, and in the history of nations — in which delusions are organized — when non-expertness in any special line — long restrained through circumstances or negligence — becomes a volcano; the low mutterings and reverberations that are at once so frequent and so slight, but so harmless as to cause no alarm, suddenly cease, and from the long quiet crater an eruption appears, darkening the sky and burying the earth in its fiery streams. Such was the witchcraft excitement in Salem in 1692; such was the Guiteau excitement in Washington in 1882; the one marking the death of the dogma that the innocent should be condemned to death for the fancied crime of witchcraft, on spectre evidence; and the other marking the death of the dogma that ability to know right from wrong is proof of responsibility, and that the insane who commit murder should be hanged.

"As the twenty victims of the Salem judicial massacres were nearly the last of the immense army of murdered witches, so Guiteau will be nearly the last important lunatic ever hanged on this continent; and through all time his trial will stand as the Salem witchcraft trials have stood, as a historic memorial of the power of passion reënforced by superstition."

The Physician Himself and What he should Add to the Strictly Scientific. By D. W. Cathell, M. D. Baltimore: Cushings & Bailey. 1882.

This is an essay on personal questions in medical practice. The advice given to guide the physician in his conduct toward his patients and the public is sufficiently sound and sensible, and may be read with profit by those who feel that they require instruction on this subject.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 7, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

REPORT OF A SELECT COMMITTEE OF THE HOUSE OF COMMONS ON CONTAGIOUS DISEASES ACTS.

In the last issue of the Journal we noticed the annual report of the Assistant Commissioner of Police, in England, concerning the operation of the Contagious Diseases Acts during the last year, reserving for comment this week the more important and voluminous report to the House of Commons from the select committee on these acts accompanied by the proceedings of the committee. This report has been printed by the House of Commons, and is at once a carefully drawn, an interesting, and a convincing document.

The committee were first appointed in June, 1879, on motion of the Secretary of State for War, for the purpose of inquiring into "the administration, operation, and effect of the Contagious Diseases Acts, 1866 and 1869, and were also empowered to receive evidence concerning similar systems in the British Colonies, or in other countries, and to report whether the Acts should be maintained, amended, extended, or repealed."

Since that time the committee have examined seventy-one witnesses and sat sixty-eight days. Their inquiries were confined to the operation of the Acts in Great Britain and Ireland; as it was found that too great delay would be inevitable in reaching a report were foreign countries and the British Colonies included, and that owing to the difference between English and foreign and colonial habits and social institutions, scarcely any additional light would be thrown on the questions under consideration.

The first Contagious Diseases Act was passed by Parliament in 1864 and repealed in 1866, and the present Acts were passed in 1866, 1868, and 1869. Want of space prevents our giving the details of these Acts, nor is that necessary. The important provisions, those which make a study of the operation of the Acts of general interest to the physician or the sociologist everywhere, are contained in the sections which deal with the periodical medical examinations of common prostitutes, and their detention, if diseased, in a hospital. By section 15, where information on oath is laid before a justice by a superintendent of police that he has good cause to believe that a certain woman is a common prostitute, and either is resident within the limits of a place to which the Act applies or being resident within ten miles of those limits, has, within fourteen days before the laying of the information, been within those limits for the purpose of prostitution, the justice may, if he thinks fit, issue a notice calling on such woman to appear at a certain time and place. On being satisfied of the truth of the information the justice may order the woman to be subjected to a periodical medical examination by the visiting surgeon for any period not exceeding one year, for the purpose of ascertaining whether she is affected with a contagious disease. Any woman may, by a voluntary submission in writing, signed in the presence of the superintendent, subject herself to a periodical examination for any period not exceeding one year. If on examination the woman is found diseased she may be detained in hospital. Any woman desiring to be relieved from examination may apply in writing to a justice, who, if satisfied she has ceased to be a prostitute, or if, with his approval, she enters into recognizance for her good behavior during three months, may order her to be released therefrom. "The periodical examinations" according to present practice take place at intervals of a fortnight. The Acts apply to thirteen districts — called "subjected districts" — in Great Britain, and two in Ireland, selected on account of the number of soldiers and sailors quartered in them, and the amount and virulence of venereal disease they gave proof of in periods anterior to the passing of the Acts.

The Acts have previously been the subject of a report of a commission appointed in 1870 to consider their operation as the result of a strong opposition to them in which several ladies were very active.

The present committee divided their inquiry into two branches: (1.) The hygienic effect of the Acts, especially on the health of the army and navy. (2.) The constitutional, moral, and social aspects of their principles and administration.

In regard to the first branch of their inquiry, which was practically confined to the army, the committee declare themselves to be of the opinion that the Acts have successfully served the two objects to which they were directed, the diminution of venereal disease, and the increased efficiency of the army. The Acts have had in reality but an inadequate trial. In the earlier years, from 1866 to 1869, they were not in full efficiency. The three following years were not a sufficiently long period to develop their full influence, and their utility thenceforward has been diminished up to 1879 by the action of Lord Cardwell's order." (An order depriving soldiers affected by venereal diseases of pay, and consequently producing concealment of disease.) "The benefit conferred since 1866 is great, but it is only an earnest of what the Acts may be expected to do hereafter for the health and efficiency of the army." They report a very general opinion on the part of the medical profession, both in and outside of the subjected districts, that on hygienic grounds the Acts should be maintained.

In pursuing the second branch of their inquiry, namely, the operation of the Acts as regarded in their constitutional, moral, and social aspects, the committee, duly impressed with the great delicacy and difficulty of the considerations involved, take up first the main objections to the Acts made on other than hygienic grounds. In answer to the objection that they involve in theory the recognition and encouragement of vice by the state, the committee reply that "the Acts do not give prostitution more toleration than it enjoyed before their existence or than it now enjoys where they are not in force. It is not the Acts but the administration of the ordinary law that gives it toleration. All the Acts have done is to insist that the toleration permitted by the institutions of the country shall be exercised with less detriment to public health." They are of the opinion that "this objection to the system involves fundamentally the opinion, which, however, the opponents of the Acts strenuously reject, that prostitutes who have no intention of leaving their calling should not be provided with the means of cure, lest their freedom from disease should encourage men to associate with them." "The insistence on religious and moral influences make the system in principle an ally and not an enemy of religion and morality." The objection that the Acts violate constitutional principles the committee do not share, stating that "the prostitute, in order to prevent the spread of a dangerous disease, is compelled to submit to measures which are not in themselves indecent, and which virtuous women often undergo voluntarily. The examination is not in itself, and apart from the causes which necessitate it, a dishonor, and the compulsion to which the prostitute has to submit is the result of her own misconduct." A third objection that the Acts, in practice, increase vice by making it safe, is met by the answer that the class of men most protected by the Act is, as a rule, composed of those who gratify their vicious passions without the slightest regard to any sanitary consequence. It is also pointed out that this objection, founded on the supposed tendency of the Acts to secure immunity from disease, is urged by the very persons who contend that they have, from a sanitary point of view, proved a complete failure. A fourth objection, that the Acts affect unfairly the female sex, is disposed of by the reply that they are not directed against women, but against a class, namely, prostitutes, and that no corresponding class exists among the male part of the population. The objection that virtuous women may be and are brought under their operation was considered by the committee to be of the gravest kind, and if sustained fatal to the maintenance of the Acts; they therefore spared no labor in probing it to the utmost, and as a result they are not satisfied that in a single case the action of the police has been marked by the carelessness and misconduct somewhat recklessly attributed to them, but find, on the contrary, that they have hitherto discharged a novel and difficult duty with moderation and caution.

Another objection was that the Acts have increased clandestine prostitution. This the committee did not find borne out, and they believe, on the whole, that "the deterrent effect of the Acts and their judicious administration have diminished the number of clandestine as well as public prostitutes."

On the other hand, the committee are of opinion that no room for doubt can exist that the following advantages, other than hygienic, have been conferred by the Acts: (1.) A diminution of prostitution in subjected districts. (2.) An almost entire suppression of juvenile prostitution. (3.) Fallen women have been rescued from the frightful state of filth and disease in which they had previously lived, and thus been placed under conditions in which they for the first time become amenable to humanizing and reforming influences. (4.) Public order and decency have been promoted in the districts in which they are in force.

After thus reviewing the various arguments which have been urged against and for the Acts, and dissecting the evidence by which these have been supported, the committee report that they would not recommend either a repeal, an extension, or any amendment of the Acts. An extension is not thought desirable on the ground that public opinion is not yet quite ripe for it.

◆

EIGHTEENTH ANNUAL REPORT OF THE BOSTON CITY HOSPITAL.

The Report of the Boston City Hospital for 1881 and 1882 records few changes in the general administration of the institution, but gives simply the details of the year's work. There have been received for treatment during the time covered by the report 4,382 patients, who spent an average of twenty-three and one fourth days each in hospital. In the out-patient department 12,015 patients made 38,676 visits, and 1735 individuals were examined for admission and rejected, 106 being refused for lack of accommodation. Five hundred and sixty-seven patients were admitted with accidental injuries, and of all the patients received into the hospital 139 died within forty-eight hours after admission.

The same world-wide complaint of overcrowded charitable institutions is to be found here. The temptation to crowd the buildings beyond their actual capacity has been resisted, and the actual number treated was less the past year than the year before. During the previous year it was attempted to provide, in some way, for all urgent cases, by putting beds in corridors, and in places unsuitable for the proper treatment of the sick. It was soon found that those under treatment were not as well cared for; the nursing force became overworked, and the attempt to treat an excessive number was so manifestly injurious as to compel the restriction of the admissions to the actual capacity of the wards.

An attempt to remedy the necessity of rejecting worthy cases was sought in devoting one ward hitherto devoted to women to men, which was successful only so far as to transfer the greater number of rejections from the males to the female applicants.

The last report estimated that "the city incurs an expense of at least ten thousand dollars annually, for the treatment and board of patients who, having no legal settlement, are properly chargeable to other cities, towns, or the State." Accurate investigation has shown that during the past year there has been expended more than $21,000 on such patients.

The trustees seem to be well-nigh discouraged from any attempt to discriminate in the bestowal of charities, as the following would seem to indicate: —

"It has been demonstrated here, as at other hospitals and dispensaries, that large numbers apply for treatment who come from the surrounding towns and cities, and hence have no claim on the hospital, or who, living within the city, are well able to employ a physician at home. This distribution of medical charity, more or less indiscriminate, has long been an abuse. The evil can be only remedied when a more correct public sentiment on the subject is established in the community."

The use of tents during the summer months, to which we alluded not long ago, is referred to as one "of paramount importance in the recovery of serious cases." It is to be hoped that the same satisfactory measures will be adopted on the medical side of the house. The 178 cases of typhoid fever would seem to offer an abundant field for open-air treatment. Many of the cases of chronic pneumonic phthisis, of which there were 210, would find a fair substitute for the impossible journey to the far West in the free access of our own atmosphere, from which many of them have been debarred by the nature of their labors or their own careless habits.

The space devoted to the Training School would indicate that it is a matter of pride and paramount interest to the superintendent, who says of it, that by its closer incorporation with the true work of the hospital, by the improved methods incident to its growth, and by a superior class of pupils, it has greatly enhanced the value of the hospital in its relation to the public, and in its work of caring for the sick of this city.

If the positions taken by its graduates may be considered a fair test of its merit, the City Hospital Training School certainly ranks high.

We have only hinted at the more interesting portions of the report; it well deserves the notice of all interested in the welfare of the institution.

◆

THE EFFECT UPON HEALTH OF PROLONGED HEAT AND DRYNESS AS SHOWN BY DEATH-RATES.

WE have brought together, for comparison, the total death-rates and highest and lowest death-rates of the thirty-five cities and towns in Massachusetts reporting to the State health officer for the years 1881 and 1882. After so unusual a period of continuous heat, with absence of rain, as prevailed in this State from early in July till the middle of August, it is a matter of interest to observe the effect from a comparative point of view upon the general health.

Although the extreme heat subsided about the middle of August, the dryness still continues. The level of the subsoil water, although now low, resisted for a long time the effects of the drought which soon parched the surface of the soil, on account of the heavy rainfall during the spring months.

The death-rates for the two years are calculated from the census population of 1880, and any error of course affects the death-rates of the year 1882 more unfavorably than those of 1881. There have been no especial epidemics, however, and the real increase in sickness and mortality is to be attributed to the heat and dryness.

AUGUST, 1881. For the week ending August 6th the total death-rate was 29 16, ranging from a minimum of 4.20 in Fitchburg to a maximum of 51 in Salem. Mean temperature at the Signal Office in Boston 73° F.; total rainfall at Boston .13 in.

August 13th, total death-rate 27.58, minimum 10.79 in Gloucester, maximum 54.78 in Salem. Mean temperature (Boston) 73° F.; total rainfall (Boston) .21 in.

August 20th, total death-rate 28.67, minimum 7.70 in Newburyport, maximum 45.33 in Holyoke. Mean temperature 62° F.; total rainfall .81 in.

August 27th, total death-rate 22.85, minimum 8.41 in Fitchburg, maximum 37.78 in Salem. Mean temperature 67° F.; total rainfall .15 in.

AUGUST, 1882. For the week ending August 5th total death-rate 30.73, minimum 8.15 in Lynn, maximum 51.98 in Fall River. Mean temperature (Boston) 71° Fahr.; total rainfall (Boston) .00 in.

August 12th, total death-rate 33.34, minimum 8.64 in Malden, maximum 56.52 in Salem. Mean temperature 74° Fahr.; total rainfall .53 inches.

August 19th, total death-rate 30.51, minimum 7.91 in Gloucester, maximum 48.98 in Salem. Mean temperature 70° Fahr.; total rainfall .43 inches.

August 26th, total death-rate 24.29, minimum 15.60 in Springfield, maximum 42.03 in Brockton. Mean temperature 63.4° Fahr.; total rainfall .46 inches.

The response of the death-rate to a prolonged elevation of temperature, is well exhibited in the foregoing if taken in connection with the records of the month of July; the effect of falling subsoil water is hardly exhibited in so small a period.

The constantly high death-rate of the city of Salem under all circumstances in both years is striking, and one might infer something unsatisfactory in the administration of its sanitary interests.

◆

MEDICAL NOTES.

— A series of experiments has been recently conducted by Herr Kissling, of Bremen, with the view of ascertaining the proportions of nicotine and other poisonous substances in the smoke of cigars. His paper, in *Dinglers' Polytechnisches Journal*, gives a useful *résumé* of the work of previous observers. Only a small part of the nicotine in a cigar is destroyed by the process of smoking, and a relatively large portion passes off with the smoke. The proportion of nicotine in the smoke depends, of course, essentially on the kind of tobacco; but the relative amount of nicotine which passes from a cigar into smoke depends chiefly on how far the cigar has been smoked, as the nicotine contents of the unsmoked part of a cigar is in inverse ratio to the size of this part — that is, more nicotine the shorter the part. Evidently, in a burning cigar, the slowly-advancing zone of glow drives before it the distillable matters, so that in the yet unburnt portion a constant accumulation of these takes place.

It would appear that in the case of cigars that are poor in nicotine, more of this substance relatively passes into smoke than in the case of cigars with much nicotine; also that nicotine, notwithstanding its high boiling point, has remarkable volatility. — *Scientific American*, August 12, 1882.

— A modification of the Esmarch method of producing artificial bloodlessness is reported as having been in vogue for some time in Australia, where, indeed, it is supposed to be the genuine Esmarch method. A stout ring of small size, made of rubber tubing, is rolled up the limb from the extremity, driving the blood before it. When the desired height has been reached a pad of cloth is introduced under the ring, over the artery, to produce additional compression, and the ring remains *in situ* during the operation.

Miscellany.

CONFERENCE OF STATE ANALYSTS OF FOOD AND DRUGS AT MONTREAL.

DURING the late meeting of the American Association for the Advancement of Science, held at Montreal, there were many informal discussions held among those members present who held official appointments under the several laws for the prevention of the adulteration of food and drugs, passed in the United States and Canada, as to the special merits and defects of their several statutes, and as to the advantages that would result from the formation of an association, similar to that already in England, of those holding such public appointments in America.

It was uniformly agreed to by all as of vital importance for the successful execution of all such laws that the analysts themselves should on no account act as inspectors to collect samples, and as a general rule should not even know from what sources the articles had been obtained. This relieving them from any suspicion of personal bias is of very great importance to the analysts, as there is always quite enough outcry against them at first without their having to do anything to make themselves personally obnoxious. The collection of samples by the inspectors should of course be under the direction of the analysts, as they are the ones presumably best informed as to the classes of goods most likely to be adulterated, and they can, moreover, thus arrange for the selection of such classes of articles as they can most conveniently carry on the analysis of at the same time.

The formation of a society of the Public Analysts seemed desirable, as furthering their meeting from time to time to discuss and examine new methods, and to decide upon certain definite processes of analysis to be used in the case of each sample which may be submitted to them. Without such uniformity of methods there can be no just comparison of the results obtained. They should also agree upon the certain definite limits of variability to be submitted to their several State Boards of Health for their approval. In short, association among the Public Analysts of America, it is hoped, would do for them and the cause which they represent all that which the Massachusetts Medico-Legal Society has done and is doing for the Medical Examiners in this State, and what the English Society has done for the Public Analysts there.

CONCERNING THE TREATMENT OF THE WOUND OF PRESIDENT GARFIELD.

AN ADDRESS BEFORE THE PHYSIOLOGICAL SOCIETY OF KIEL, DELIVERED FEBRUARY 2, 1882,

BY DR. FRIEDRICH ESMARCH,

Professor of Surgery in the University of Kiel.

TRANSLATED FOR THE BOSTON MEDICAL AND SURGICAL JOURNAL BY R. STANSBURY SUTTON, M. D., PITTSBURGH, PA.

IN the Boston Medical and Surgical Journal of November 24, 1881, I find a letter from the senior surgeon of the Pennsylvania Hospital, Dr. William Hunt, in which he speaks of the symptoms of President Garfield's wound, defends the attending physicians against the charge that they had not done enough, and finishes with an attack on the antiseptic method in the following language: —

"Much has been said in this case of the antiseptic method. It was, as I believe, used to a very great extent. Its practice was complete with the exception of the spray. I agree with all my heart with the German surgeon who says, 'Away with the spray.' But can there be a better commentary on the improved theory of antiseptic surgery than the case of the President? I protest earnestly against this theory, or at least against its effect on the contemplation of many people, that all the elements which produce septic poison must come from without. I have too much respect for Mr. Lister to assume that he believes what the extreme followers of his school teach. The influence of such a doctrine on the young generation of physicians and surgeons is bad, because it leads to restricted intuitions, and prejudices plain diagnosis. Its leads far too much to the outside, for the putrefactive element, in my opinion, comes much oftener from within than from without. Was not the injury to the vertebra in this case a sufficient cause of the septicæmia? It may be a useful thing to first drive out all the rats, and then to fill the holes with poison, and shut them up, but it is a bad thing when we fill the holes with poison, shut them up, and leave the rats within. They will continue to dig and make new holes. The restricted antiseptic believer looks about the room, and not at the patient, while he ought to look at both, and to pay proper attention to all septic possibilities."

These utterances of an esteemed American surgeon induce me to communicate my opinion of the treatment of President Garfield's wound, inasmuch as I see in different American and English medical periodicals, of which I get a sight, that the wound of the President and its treatment has been publicly discussed by the most celebrated surgeons of America, and very different opinions have been expressed. The *North American Review* for December, 1881, contains four articles, which emanate from well-known authors. In the first article, Dr. Hammond, author of the Hand-Book of Military Hygiene, finds fault with the attending physicians, because they have not tried to remove the ball. He further says, "The original injury was not a fatal one, but the President has not had all the advantages that modern surgery offers." Marion Sims, on the contrary, asserts that the wound of the President was absolutely mortal; that the injury of the vertebra was of necessity a cause of septicæmia; that it was impossible that the President could have died without it, and that it was impossible that he could live with it. John Ashurst and Hodgen then again defend the treatment of the attending physicians, and the former intimates that there has not been sufficient care taken to nourish the patient. On the whole, I am compelled to agree with Dr. Hammond's last sentence, but from quite a different stand-point.

In order to argue my opinion of the case, I will premise an abridgment of the history of the illness which Dr. Bliss has published in the *Medical Record* of October 8, 1881, and to this I will append, at appropriate places, short critical remarks.

President Garfield, on the morning of July 2, 1881, at nine o'clock, received a revolver shot; it came from near by, from behind, and from the right side, and entered his back. The ball entered four inches from the middle line of the back, close above the eleventh right rib, fractured it, and passed on, and remained in the body. The President fell, lost consciousness for a short time, vomited. He was carried into an adjoining house, laid upon a mattress. Being very "collabirt"[1] they gave him stimulants. The first physician who saw him, Dr. Townsend, immediately put his finger into the wound, but without finding the ball.[2] Dr. Bliss soon arrived, and found the President very pale, "collabirt," the respiration sighing (8 to 10 per minute), the pulse very small, weak, frequent (about 120 per minute), face and hands covered with cold perspiration. The patient complained of a feeling of heaviness and deafness, later of stinging and pain in the lower extremities.[3] Dr. Bliss immediately examined the wound,[4] out of which some blood was flowing, with a Nélaton's probe, which he inserted to a depth of three and a half inches, and which, as it was withdrawn, stuck fast in the fragments of the crushed eleventh rib, and was only loosened by pressure on the sternal end of the rib.[5] Then he put the little finger of his left hand into the wound,[6] but did not feel anything but torn tissue and solid blood-clots. Then he inserted a curved silver probe, downwards in front, and behind in different directions, to find the canal made by the bullet. Even now, not feeling anything, he concluded that the ball, after fracturing the rib, had passed on into the liver, and he desisted from a further examination of the wound, and explained his opinion to the assembled physicians. I learn from the *Medical Record*[7] that the physician, General Wales, then examined the wound with his finger. Because the President earnestly desired to be brought to the White House, a "temporary dressing"[8] was put on, and he was driven rapidly in an ambulance over a road, part of which was bad, to his home. The President, being asked, declared that the movement of the ambulance did not give him "disagreeable feelings."[9] After his arrival he was laid upon a bed, and his condition was carefully examined. The great prostration continued, the extremities were cold, the respiration slow, sighing, the pulse very weak. He sometimes vomited, and there was profuse perspiration over the whole body. He often complained, with a hoarse voice, of violent pain in the lower extremities, for the relief of which morphia was injected under the skin. On account of his great prostration, his clothing was not removed until five o'clock P. M. (up to this time no antiseptic dressing of any kind was applied), because they supposed it might be dangerous. They found the margin of the wound somewhat discolored, and imputed it to blood effused into the tissues. They dressed the wound with carbolic wadding, and wrapped up the body in warm flannel.

The urine was retained until six o'clock P. M.;[10] a catheter was passed, and six ounces of clear, not bloody,[11] urine was evacuated. The catheter was not used again, and the stools were normal from the day following to the end of the case. At ten P. M. pulse 158, temperature 36° C., respiration 35, the collapse at its highest. The physician general thought he was dying. All the physicians, of whom three or four were always sitting by the bed, were of the same opinion. At 11.20 P. M. the reaction began, the pulse sunk to 120, the respiration to 18, the temperature rose to 37° C. The carbolized dressing had shifted, and must be reapplied.[12] During the night a discharge of dark blood continued from the wound, and made further changing of the dressing necessary.[13] On the following morning the discharge had ceased, and the bandage was adherent to the skin. The night was tolerably good, with the aid of morphia injected, but the pains in the legs continued, and were accompanied with hyperæsthesia of the scrotum. On the morning of July 3d the condition was very satisfactory; the temperature and respiration were nearly normal, the pulse 115. The primary reaction had reached its highest point (pulse, respiration, and temperature?) at two P. M. Some tympanitis was evident, but no trace of peritonitis, no pain on pressure, no stretching of the abdomen at any time. At ten P. M, pulse 120, temperature still 38° C., respiration 20. On the following morning, July 4th, Dr. Agnew, of Philadelphia, and Dr. Hamilton, of New York, came to a consultation. The President had passed a tolerably good night, with slight interruptions had good sleep, the disposition to vomit had disappeared, and the pain by means of morphia was arrested. The temperature was 37.8° C., pulse 104, respiration 19.[14] Notwithstanding, a new examination of the wound was made, and the track of the bullet sought after with sounds and flexible bougies, etc.[15] They arrived at the conviction that neither the liver, nor the kidneys, nor the intestine, nor the peritonæum were injured,[16] and withheld operative interference. The pains in the legs, the hyperæsthesia of the scrotum, the disposition to vomit, had by the evening of July 4th gradually disappeared, and the case progressed, with slight uncertainties, but quite satisfactorily, until July 23d. The digestion was tolerably good, the wound suppurated, the temperature was always normal in the mornings, a slight fever appeared sometimes in the evenings. On July 21st an accumulation of pus was discovered under abdominal covering; it was evident under the twelfth rib, reaching to the middle erector spinæ, and under the latissimus dorsi and at every change of the bandage it was carefully squeezed out toward the external bullet wound.[1] On the evening of July 23d a chill occurred, followed by a temperature of 40° C., pulse 124, and respiration 26 per minute. An incision was made over pus accumulation down to the broken rib, of which a small splinter was removed. The chill again occurred in the evening, at eleven o'clock, and again during the following night. Because there was not much improvement they enlarged the opening on July 26th, and removed another small fragment of the broken rib. Upon pressure on the abdomen, between the umbilicus and spina anterior, above and behind, a peculiarly white and consistent pus flowed out of the wound, which, as it seemed, had not before this time come in contact with the air? On August 6th a rise in temperature again occurred, and they discovered a hard tumefaction in the right groin (*Darmbeingrube*). A flexible catheter could be passed seven inches downwards toward this tumefaction. From this time this was done twice a day, for the purpose of washing out the matter, by means of an irrigator filled with a solution of permanganate of potash.[2] On August 8th the President was etherized, and the wound again enlarged; by means of a long probe a still deeper canal was discovered, and a counter opening was made near the anterior superior spine of the ilium. At first it was supposed that the bullet had gravitated, but it proved to be only a retroperitoneal settling of the pus caused by the broken rib. (Later the hard tumefaction entirely disappeared.) From this time until August 14th a tolerably satisfactory condition continued, when it was followed by repeated vomiting and great prostration, and a moderate rise in temperature. They withdrew the nourishment by the mouth, and resorted to nutrient enemata, and the stomach again became quiet. On August 18th a tumefaction of the right parotid gland appeared, and subsequently suppurated. An incision was made, but little discharge followed it. An abundant supply of pus and dead tissue did not occur until after the abscess had spontaneously opened into the mouth and external auditory canal, and after several incisions had been made; these wounds healed almost entirely before death. The general condition meanwhile grew but little better: small abscesses appeared in the axilla and in other parts. On the sacrum several bed sores appeared. In addition a severe bronchitis and a choking up of the under part of the lungs, especially of the right, came on. The President was now and then delirious, and the margin of the bullet wound looked badly.

---

[1] Collabirt is probably faint.

[2] Medical Record, vol. xx., No. 3, p. 57. That he first washed and disinfected his hands is not stated.

[3] Concussion of the spinal marrow.

[4] Of antiseptic precautions nothing is said.

[5] Without the spray, a dangerous procedure.

[6] That he first washed and disinfected his finger is not said.

[7] Loc. cit., page 71.

[8] What is that?

[9] From which it was to be inferred that the vertebra were not dislocated.

[10] Spasm of urethra.

[11] Also no injury of the kidneys.

[12] An antiseptic dressing should not so easily shift its position.

[13] It was impossible that the bandage could have been very thick.

[14] Also the whole condition very satisfactory.

[15] Wherefore? Dr. Hamilton, by his own report, desisted from probing with the sound. Concerning the proper disinfection of the instruments and the remaining antiseptic precautions nothing is said.

[16] Which they should have known without this examination.

On account of the great heat and the questionable healthfulness of the White House, it was resolved to remove the President to the sea-shore. On September 6th he was taken to Elberon Cottage, Long Branch, with all possible precaution and rapidity (sixty miles per hour); he endured the journey well, with slight fatigue at the end of it, and was on the following and for a few days evidently better, so much so that he dismissed some of his physicians. But on September 17th, at eleven A. M., a violent chill suddenly occurred, and was followed by a rise of temperature and violent convulsive pains in the chest (mediastinum anticum), which recurred from time to time until death. On September 18th the chill again occurred, followed by a rise of temperature and increasing prostration. On the morning of September 19th two chills occurred, then there was a temporary improvement, when suddenly, at ten P. M., death occurred, as if from some internal injury.

At the close of this report Dr. Bliss says that most approved antiseptic dressings were used[3] during the entire progress of the case.

From the detailed report of the autopsy, which is signed by Dr. Bliss and four other physicians, we take the following data. The external bullet wound was cicatrized and depressed, and was three and a half inches to the right of the spinous processes of the vertebral column, in the tenth intercostal space. A deep incision, from the operations of July 24th, and August 8th, was parallel with the upper margin of the twelfth rib. The twelfth rib was found broken one and one fourth inches to the right of the transverse process of the twelfth dorsal verterbra, a fact not discovered during life. The bullet then entered the upper part of the right side of the first lumbar vertebra, a quarter of an inch in front of and below the intervertebrate foramen, and had also injured the intervertebral cartilage lying above it; passed through the body of the vertebra in a diagonal line, inclining toward the left and front, and made an exit half an inch from the median line.

The spongy substance of the vertebra was destroyed, the fragments were somewhat dislocated, and a few splinters were in the neighboring soft parts. From the canal made by the bullet several deep cracks ran upwards to the twelfth dorsal vertebra and downwards to the next intervertebral cartilage. Both cartilages were partly destroyed by ulceration. The vertebral canal was not opened, the spinal marrow and its membranes were not injured, but were quite normal.

The bullet was lying two inches from the column, behind the peritonæum, in the fatty cellular tissue, closely under the margin of the pancreas. It was perfectly encapsuled in a fine cellular cyst, which contained besides the bullet a thin layer of inspissated pus and a small residuum of blood clot. From the cyst, the track of the bullet behind the pancreas was for an inch entirely obliterated and healed. That portion of the bullet's course, which was between the broken eleventh rib and the first dorsal vertebra, was considerably enlarged, and the pus had broken through the adipose cellular tissue behind the right kidney and had descended between the peritonæum and fascia as low as the groin. The adipose tissue in the neighborhood was infiltrated from inflammation.

The physicians supposed this gravitation of pus was in the canal[4] made by the bullet. Behind the liver, between this and the transverse colon and its mesocolon, an abscess, four by six inches, was found; in it lay the gall bladder. It was surrounded by a thick pyogenic membrane and fresh adhesions. It contained about two ounces of a greenish-yellow fluid, a mixture of pus and bile, but there was no opening in it communicating with the wound. The liver was neither injured nor inflamed. That portion of the bullet canal which led from the obliterated section of it to the left side of the spine was filled with a blood clot, which extended to the left, meeting a coagulum of irregular shape, nearly as large as the fist, and which came in sight from behind the greater curvature of the stomach, when they had detached the large end of the latter. The blood clot came from an opening four tenths of an inch in length in the trunk of the splenic artery, two and a half inches to the left of the cœliac axis, and must have formed several days before death, for the everted margins of the opening were connected by firm adhesions with the adjacent cellular tissues, forming a continuous wall on the border of the clot. The peripheral portions of the clot were deposited in tolerably firm concentric layers (false aneurism). The blood had broken through the peritonæum behind the spleen, and so got into the peritoneal sac.

---

[1] Concerning the danger of the act of squeezing out the pus from wounds, especially when there are bone splinters in it, Stromeyer (Max., page 126; Chirurgie, page 795) and I (Resectionen, page 22; Verbdpl. u. Feldl., page 80; Handbuch d. Kriegschirurg, Technik., page 1, section 2) have spoken repeatedly and earnestly.

[2] At all events an obsolete and ineffectual method of disinfection.

[3] This means very little. There is a great difference whether a wound is treated with antiseptic dressings or whether it is treated according to the principles of the antiseptic method. It is evident that sometimes bad mistakes were made in the latter.

[4] Perhaps it was made artificially by the catheter?

Doubtless this tearing of the tissues by the extravasated blood was the cause of the violent paroxysms of pain which occurred before death. Both lungs were the seat of hypostatic pneumonia, but neither in them or in other organs were metastatic abscesses found, excepting the left kidney, in which was a small abscess one third of an inch in diameter.

From the history of the case, including the post mortem, I draw the following conclusions: —

(1.) President Garfield did not receive an absolutely mortal wound.

Neither liver nor peritonæum were injured. There was no peritonitis. No important organ was injured, excepting the bony spinal column. The vertebral canal was not opened, the spinal marrow was found uninjured. The injury to the vertebra was not of itself mortal; it might have healed very well had it not been for the suppuration. There are in military surgery enough examples of the healing of such wounds.[1]

(2.) The bullet was not the cause of the suppuration; it probably carried no septic material into the wound, for it was encapsuled, and the adjoining part of its track was healed.

(3.) The cause of the suppuration, the septic material, must have been put in from outside, and different actions in the treatment are to be accused of that.

First. The immediate examination of the wound with the bullet probe and finger, which were probably not disinfected (without antiseptic precautions).

Second. The repeated examination on the third day (probably in the same way) by several physicians.

Third. The entirely insufficient antiseptic method in the treatment of the wound (bandage technics deficient).

Fourth. The squeezing of the wound on July 21st.

Fifth. The then daily probing and spouting of the wound with an insufficiently antiseptic fluid. (A method of disinfection out of use.)

Sixth. The omission of a free incision of the pus cavity (August 8th).

A metastatic inflammation of the parotid gland did not appear before the 18th of August; it did not amount to real pyæmia. The President did not die of pyæmia, but of hæmorrhage after his strength was exhausted by the septic fever, the bronchial catarrh, and the hypostatic pneumonia. The blood came from an opening in the splenic artery, which was perhaps made by the bullet or a bone splinter; but probably extended afterwards, slowly by reason of the suppurative process, from a point bruised by the bullet or a bone splinter.

It is probable that before the fatal hæmorrhage occurred a spurious aneurism had formed, which opened under the suppurative process. If suppuration had not occurred, the injury to the artery might not have been followed by evil consequences. It seems that our exhortations to place first in the treatment of shot wounds the principle "do not do any damage," and the fine observations of Pirogoff, Klebs, Reyher, Bergmann, and others on the manner of curing the worst bullet wounds without suppuration, have not made any influence on our colleagues beyond the ocean. It is true that the public still think the bullet most dangerous; the soldier is happy when you put into his hand the bullet which you have cut out. But the surgeon should know that the bullet itself does not do any damage in the most of the cases; the damage which proceeds from it is caused by it in its course; the damage which is added to it mostly proceeds from the examiner's fingers.

It seems that the attendant physicians were under the pressure of the public opinion that they were doing far too little. But according to my opinion they have not done too little but far too much.

If they had entirely omitted the search after the bullet, and immediately after the injury dressed the wound in a real antiseptic way, the President might perhaps be still alive, like our Emperor, from whom Von Langenbeck did not cut out a single one of all his many small shots.

◆

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The annual meeting of this Association at Montreal was adjourned August 30th, after a session of a week, successful alike in the number of attendants, the abundance of the material presented, and the hospitality of the local committee and of the inhabitants of the city generally. Nine hundred and fifty members registered during the session, and three hundred and twenty-five new members were elected.

A number of distinguished men were present from abroad, including Dr. W. B. Carpenter, of London. Herbert Spencer, who was at one time expected, did not appear. While the attendance from the United States was in the aggregate large, it was noticed that the older eastern colleges were not so well represented as the younger institutions of the West. The few who were present from the larger centres of scientific inquiry, however, included some very distinguished names. The absence of many others is doubtless to be accounted for by the fact that the students who live in a constant atmosphere of scientific research feel less the necessity of that stimulus of numbers which constitutes so important an advantage to workers less favorably situated in their customary surroundings. The advantages and disadvantages of such congresses are clearly put by a correspondent in the *Nation*, who says: —

---

[1] Every sportsman knows that the stag soon recovers from that shot which is called a hollow shot. (Hohlschuss.) This is the name for a high shot, in which the bullet injures neither the bowels, large vessels, or spinal marrow. The large vessels lie close to the lower border of the vertebral bodies, the spinal marrow on a level with the upper border of the same, — the shot passing between perforates the body of the vertebra. If the shot goes through the spinal marrow the stag breaks down immediately from paralysis of his hind legs, and does not rise when the hunter approaches to give him the death stab. If the aorta or vena cava is injured he does not fall immediately, but soon after, and dies from hæmorrhage.

But the high, or hollow shot, is considered by hunters a bad shot, because they do not get the game by it. The stag does not die afterwards because no surgeon comes to his assistance to insert septic matter into the wound by fingers or probes. The stag does not die if the shot strikes a vertebral process. The stag falls because the hind legs are momentarily paralyzed by the concussion of the spinal marrow. If the hunter now approaches, the stag now goes on by means of its front legs, like a sea dog, pulling the hind legs after it; suddenly it jumps up, and using all four legs makes its escape good. This sportsmen call a "Krellschuss," a fool shot.

"Some of the best scientific men in the country are very shy of them, believing that science is to be promoted by hard work in quiet hours, and that its results are to be communicated to learned bodies and placed on record in careful memoirs rather than announced to popular assemblies and reported in the newspapers. There is no doubt that the gaining of momentary applause is a very unworthy motive to inspire intellectual exertion, and many a capable person is impeded for life by yielding to the insidious temptation to be popular and to be talked about. There is also no doubt that many second-rate productions are brought forward in such assemblies as this. But there is another side to the matter. The opportunities which are afforded to the scientific men of this country and of Great Britain, France, Italy, and Germany, by their annual summer conferences are very great. Acquaintances are formed among those who are working in the same line, the younger men have easy access to those who have won renown, the older men discover the youths who are of promise; many a call to a professorship, many an appointment on a scientific investigation, has turned on such introductions as these meetings afford. The specialist who is in danger of becoming narrow is liberalized by contact with other workers; early information is obtained of inquiries not yet enough matured to be published; suggestions and counsels are freely interchanged."

The presiding officer of the session was Principal Dawson, of McGill College. The annual address was by the retiring president, Professor Brush, of New Haven, who gave a critical review of the history and present status of American mineralogy. After this introduction the Association divided itself into its nine special sections, each presided over by a vice-president, — "the nine capital vices of American science," as some one styled them. These sections all being in session at the same time much valuable material was presented before very small audiences, the members suffering from the *embarras de richesse*. This same fault, it will be remembered, has been found with the arrangement of the sessions of our National Medical Association, and could be in a measure avoided if only half the sections were in session at once. More than two hundred and fifty papers were presented, many of them of course of interest only to specialists. Among others which will attract more general attention we may mention, under obligation to the report in the *Nation*, the following: —

The address in the Mathematical and Astronomical Section was read for its author, Professor Harkness, of the Naval Observatory, on the Transits of Venus. It was an historical and, to a moderate extent, a critical review of what has been hitherto done in the observations of such transits, with particular reference to the results attained in 1874 and to those which are to be expected in 1882. Dr. H. C. Bolton, of Trinity College, gave a review of the recent work of the Chemical Section, and then took for his theme the history of chemical literature, especially in its early aspects. Mr. E. B. Elliott, the statistician, of Washington, introduced the work in Economic and Statistical Science by a statement of the province which this new section is designed to fill. In Physics the speaker was Professor Mendenhall, of Columbus, Ohio, who was formerly in Japan, and he made an address on the methods to be pursued in teaching physics in colleges. Professor W. P. Trowbridge, of Columbia College, in the Section of Mechanics, made a strong plea for the promotion of experiments in mechanics, in close connection with theoretical studies. He dwelt upon the extraordinary demands now made by the public on engineers, and gave many illustrations of what experiment has done, and instances of what it may do in the future, to determine problems of profound importance. In the Biological Section, Dr. W. H. Dall, of Washington, gave an account of what has been accomplished in this country toward a knowledge of the biology of the mollusks. In the related Section of Histology and Microscopy, Professor Tuttle, of Columbus, Ohio, questioned the propriety of a special microscopical section, and in the section last to be named, the Anthropological, a paper by Dr. Daniel Wilson, of Montreal, was read on Some of the Physical Characteristics of Certain Native Tribes in Canada.

A great deal of curiosity was manifested to hear Mr. A. Graham Bell on the use of an induction balance in detecting the presence of metal in the human body, — a line of inquiry into which he was brought by the attempt to discover the position of the ball which destroyed the life of President Garfield.

The students of natural history gathered round Dr. Asa Gray, with enthusiasm as he reviewed the history of the study of the American Flora, with sketches of the original work of Michaux, Pursh, Torrey, etc., with some mention of his own labors, and with instructive hints as to that which remains for younger botanists to undertake. The Geological Section is always well attended, and the communications of Hall, Dawson, and Carpenter gave importance to its meetings this year. Besides these speakers there was Dr. Rae, with a valuable account of his Arctic explorations, and Commander Bartlett, of the United States Coast Survey, with a wonderfully interesting *résumé* of the results he has reached within the last two or three years in the study of the Gulf Stream, as to its currents, its depth, and its temperature. Professor Dwight, of Vassar College, brought before the Section a new collection of fossils which he has discovered in a locality hitherto unnoticed near Poughkeepsie. In the Physical Section the most remarkable paper was that of Professor Rowland, describing the new gratings which he has made at the Johns Hopkins University for the study of the solar spectrum. He exhibited the results obtained by these gratings in photographs of the spectrum, which far surpass any that have hitherto been made. The ethnologists listened to an account of some personal observations upon the inner tribal life of the Omaha Indians which have been made by Miss Fletcher during her residence among them.

The next meeting of the Association occurs at Minneapolis, and the officers announced are as follows: President, Professor C. A. Young, of Princeton; Vice-presidents of Sections: Mathematics and Astronomy, W. A. Rogers, of Cambridge; Physics, H. A. Rowland, of Baltimore; Chemistry, E W. Morley, of Cleveland; Mechanical Science, De Valson Wood, of Hoboken; Geology and Geography, C. H. Hitchcock, of Hanover; Biology, W. J. Beale, of Lansing; Histology and Microscopy, J. D. Cox, of Cincinnati; Anthropology, O. T. Mason, of Washington; Economical Science and Statistics, F. B. Hough, of Lowville.

The excursions and receptions which had been interspersed liberally among the scientific proceedings were continued by the committee in charge as long as any visitors remained. It must have been somewhat appalling to the tired committee men when a dispatch was received the last evening of the congress, saying that the British Association for the Advancement of Science would meet with their Montreal brethren in 1884. But the munificent hospitality displayed on this occasion will undoubtedly respond heartily to this additional and heavy demand.

◆

THE LOCAL TREATMENT OF DIPHTHERIA.

THE details of a severe epidemic of diphtheria in Bessarabia are reported in the London *Medical Record* for August 15th. Thousands of cases had occurred, and the region originally attacked was devastated of children, when the disease invaded the neighborhood of the reporter, Dr. Julius Kupffer. In the details of the treatment pursued there is nothing especially new, except perhaps his theory of the local treatment, which aimed not primarily at disinfection of the exudation but at irritation of the muscular structure of the pharynx. On this point he says: —

"Contraction of the subjacent tissue ought, by causing such a superficial dimensional change as was incompatible with its cohesion, to release the membrane from its position, as the placenta is peeled off the uterine parietes by the contractions of the latter; the idea was indeed contained in the use and sanction of emetics. He endeavored, by continued slight tickling of the fauces, to promote hourly contractions of the constrictors, and had the good fortune to find the attempt successful. Further observations, that thin elastic membranes were much harder to release than large thick ones, corroborated the correctness of the proceeding, the former being capable of more easily accommodating themselves to the movements."

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 26, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	701	307	39.90	6.67	24.57	1.70	3.83
Philadelphia	846,984	356	142	12.08	1.63	—	3.09	5.07
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	302	185	45.02	3.31	31.45	4.63	3.31
Boston	362,535	161	77	37.88	—	28.56	5.59	1.86
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	145	63	30.61	1.37	8.96	1.37	8.96
Cincinnati	255,708	121	63	33.04	7.43	7.43	5.02	5.78
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	81	27	28.38	4.94	20.98	2.47	2.47
Pittsburgh	156,381	83	—	40.94	—	22.88	12.04	3.61
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	80	55	30.00	7.50	26.25	—	1.25
Providence	104,857	50	25	40.00	2.00	38.00	2.00	—
New Haven	62,882	37	15	37.83	5.40	32.42	2.70	—
Charleston	49,999	40	19	20.00	—	7.50	5.00	2.50
Nashville	43,461	15	5	26.66	13.33	6.66	6.66	—
Lowell	59,485	27	11	18.52	11.11	14.81	—	—
Worcester	58,295	32	24	40.00	6.24	37.50	3.13	3.13
Cambridge	52,740	17	9	23.52	—	23.52	—	—
Fall River	49,006	27	23	70.36	3.07	59.25	—	3.07
Lawrence	39,178	15	7	40.00	6.66	40.00	—	—
Lynn	38,284	25	13	40.00	—	32.00	8.00	—
Springfield	33,340	10	5	60.00	—	30.00	10.00	—
Salem	27,598	22	7	13.62	—	9.08	4.54	—
New Bedford	26,875	21	9	47.62	—	47.62	—	—
Somerville	24,985	12	6	16.66	16.66	16.66	—	—
Holyoke	21,851	18	8	50.00	16.66	38.88	16.66	—
Chelsea	21,785	11	2	72.72	—	27.27	—	18.18
Taunton	21,213	9	6	11.11	—	11.11	—	—
Gloucester	19,329	5	3	20.00	—	—	—	20.00
Haverhill	18,475	14	6	49.98	—	21.42	7.14	21.42
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	11	7	36.36	9.09	36.36	—	—
Newburyport	13,537	5	4	60.00	—	60.00	—	—
Fitchburg	12,405	8	4	62.50	—	50.00	—	—
Malden	12,017	6	1	16.66	—	—	—	16.66
Sixteen Massachusetts towns		46	24	41.31	4.35	34.78	—	2.17

Deaths reported 2513 (no reports from Brooklyn, St. Louis, and New Orleans): under five years of age 1162: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 850, consumption 255, lung diseases 107, diarrhœal diseases 535, diphtheria and croup 95, typhoid fever 80, whooping-cough 40, scarlet fever 36, malarial fever 20, small-pox 16, cerebro-spinal meningitis 14, measles six, erysipelas three, remittent fever two, typhus fever two, puerperal fever one. From *whooping-cough*, New York 23, Philadelphia and Chicago, four each, Pittsburgh two, Baltimore, Cincinnati, Milwaukee, Lowell, Worcester, Fall River, and Springfield one each. From *scarlet fever*, Cincinnati 11, New York eight, Philadelphia five, Chicago four, Baltimore three, Chelsea two, Boston, New Haven, and Woburn one each. From *malarial fever*, New York 10, Baltimore four, Chicago and District of Columbia two each, Cincinnati and Charleston one each. From *cerebro-spinal meningitis*, Chicago four, New York and Philadelphia two each, Boston, Baltimore, Milwaukee, Fall River, Fitchburg, and Quincy one each. From *small-pox*, Baltimore six, Cincinnati five, Philadelphia three, Nashville two. From *measles*, New York four, Boston and Baltimore each one. From *erysipelas*, Chicago two, Chelsea one. From *typhus fever*, New York two. From *remittent fever*, Charleston and Springfield one each. From *puerperal fever*, Chicago one.

Fifty-five cases of small-pox were reported in Baltimore, Cincinnati 30; typhoid fever 19, diphtheria 11, scarlet fever six in Boston; scarlet fever seven, and diphtheria one, in Milwaukee.

In 35 cities and towns of Massachusetts, with a population of 1,057,341 (population of the State 1,783,086), the total death-rate for the week was 24.29, against 30.51 and 33.34 for the previous two weeks.

For the week ending August 5th, in 175 German cities and towns, with an estimated population of 8,395,020, the death-rate was 28.8. Deaths reported 4643: under five years of age 2814; diarrhœal diseases 481, consumption 462, lung diseases 313, diphtheria and croup 144, scarlet fever 90, typhoid fever 62, whooping-cough 55, measles and rötheln 28, puerperal fever 18, small-pox (Beuthen two, Königsberg one) three, typhus fever (Düsseldorf one) one. The death-rates ranged from 16 in Lubeck to 52.9 in Posen; Königsberg 37.2; Breslau 36.9; Munich 28; Dresden 31.2; Berlin 33.8; Leipzig 17.3; Hamburg 27.9; Cologne 33.3; Frankfort a. M. 20.8; Strasburg 34.1.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending August 12th, the death-rate was 21.1. Deaths reported 3425: acute diseases of the respiratory organs (London) 223, diarrhœa 439, whooping-cough 97, scarlet fever 80, measles 59, fever 45, diphtheria 24, small-pox (London four) eight. The death-rates ranged from 11.9 in Halifax to 31.6 in Sunderland; Plymouth 15.4; Bristol 18.4; London 19; Brighton 21; Birmingham 22.7; Liverpool 23.8; Leicester 24; Bradford 25.8.

For the week ending August 12th, in the Swiss towns, population 494,390, there were 33 deaths from consumption, diarrhœal diseases 21, acute diseases of the respiratory organs 15, diphtheria and croup four, typhoid fever three, measles two, whooping-cough two, puerperal fever one. The death-rates were, at Geneva 11.4; Zurich 8.1; Basle 18.7; Berne 21.8.

The meteorological record for the week ending August 26th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 20	30.244	60	77	52	77	48	70	65	NW	E	E	6	5	3	C	F	C	—	—
Mon., 21	30.278	61	77	52	69	52	58	60	NW	E'	SW	4	9	10	C	C	C	—	—
Tues., 22	30.164	66	80	55	72	55	78	68	W	SE	SW	2	9	7	F	F	C	—	—
Wed., 23	30.044	61	83	60	74	52	73	66	W	SE	SW	5	6	8	F	F	O	—	—
Thurs., 24	29.828	69	81	64	91	80	76	82	S	E	W	4	5	8	O	O	C	—	—
Fri., 25	29.890	66	76	62	65	47	78	63	NW	E	E	12	7	2	C	O	F	—	—
Sat., 26	30.185	61	77	57	74	72	78	75	NE	E	S	4	12	3	F	O	O	—	—
Means, the week.	30.090	63	83	52				69										3.10	.46

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 27, 1882, TO SEPTEMBER 2, 1882.

Brown, J. B., lieutenant-colonel and surgeon. Granted leave of absence for six months on surgeon's certificate of disability. S. O. 200, A. G. O., August 29, 1882.

Alden, Charles H., major and surgeon. Granted leave of absence for three months. S. O. 196, C. S., A. G. O.

Bill, J. H., major and surgeon. Granted leave of absence to December 1, 1882. S. O. 196, A. G. O., August 24, 1882.

Smith, A. K., major and surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 131, Department of Arizona, August 22, 1882.

Hubbard, V. B., major and surgeon. Assigned to duty at Fort Wingate, N. M. S. O. 172, Department of the Missouri, August 28, 1882.

Munn, C. E., captain and assistant surgeon. The leave of absence granted him in S. O. 147, July 28, 1882, Department of the Missouri, is extended two months. S. O. 196, C. S., A. G. O.

Skinner, J. O., captain and assistant surgeon. To take charge of medical director's office, Department of Arizona. S. O. 131, Department of Arizona, August 22, 1882.

Barrows, Charles C., assistant surgeon. Assigned to duty at Fort Grant, A. T. S. O. 130, Department of Arizona, August 21, 1882.

Owen, William O., **Jr.**, first lieutenant and assistant surgeon. Assigned to temporary duty at Vancouver Barracks, W. T. S. O. 114, Department of the Columbia, August 11, 1882.

Egan, P. R., assistant surgeon. Assigned to duty at Fort Bowie, A. T. S. O. 134, Department of Arizona, August 25, 1882.

Wakeman, W. J., first lieutenant and assistant surgeon. Now at Omaha, Nebr., to report to the commanding officer, Fort D. A. Russell, Wyo., for duty. S. O. 88, Department of the Platte, August 25, 1882.

Macauley, C. N. B., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Columbus, N. Y. S. O. 147, Department of the East, August 25, 1882.

The Eighth Annual Meeting of the Tri-State Medical Society (Indiana, Illinois, Kentucky) will be held at Terre Haute, Ind., September 26, 27, and 28, 1882. President, J. M. Holloway, Louisville, Ky. Secretary, G. W. Burton, Mitchell, Ind. Treasurer, F. W. Beard, Vincennes, Ind. J. E. Link, Terre Haute, Ind., Chairman of Committee of Arrangements. William Porter, St. Louis, Mo., Chairman of Committee of Programme.

Books and Pamphlets Received. — The Multum in Parvo Reference and Dose Book. By C. Henri Leonard, M. A., M. D. Popular Edition. Detroit. 1882.

Officieller Katolog für die Allgemeine Deutsche Ausstellung auf dem Gebiete der Hygiene, Gesundheitspflege und Gesundheitstechnik und des Rettungswesens. Berlin. 1882.

Third Annual Announcement Memphis Hospital Medical College, Session 1882–1883.

The Treatment of Fracture of the Lower End of the Radius. By R. J. Levis, M. D., Philadelphia. (Reprint.)

Original Articles.

A STUDY OF SOME POINTS IN THE PHYSIOLOGY OF DIGESTION.

BY C. L. DANA, A. M., M. D.,

Professor of Physiology in the Woman's Medical College of New York.

THE FUNCTION OF THE CARDIAC AND PYLORIC PORTIONS OF THE STOMACH.

SOME time ago, in connection with my physiological lectures, I performed an experiment with the object of testing the function of the two divisions of the stomach. It would have no value alone, but it tends to confirm the observations of others, and may serve as a convenient text for the discussion of the subject of the present article.

And first a word in regard to the histology of the stomach as recently described.

The inner surface of the gastric mucous membrane is lined with cylindrical epithelium. The epithelial cells have two zones. The upper — that next the free surface — is the thicker, and is composed of protoplasm which is being changed into mucin (paraplasm of Kupfer[1]). The lower zone is protoplasm, and contains the nucleus. Many of the cells upon examination show the goblet shape which indicates the discharge of their mucoid contents. It is these surface cells which secrete most of the mucus that lines the stomach in the intervals between digestion.

The glands of the fundus are simple straight tubes, only occasionally branching at the base. Near the orifice they are lined with the cylindrical epithelium of the surface. In the remaining portion the gland is lined with small columnar cells, the "chief cells" of histologists, and with large oval cells, the "border cells." The latter are placed between or external to the former.[2]

The glands of the pyloric end of the stomach are compound, as a rule, and are larger than those of the fundus. They are lined with an epithelium formerly confounded with that of the surface, but now believed to be essentially like the "chief cell" of the fundus.[3]

As regards the functions of these different glands and cells, the following views have the latest and strongest support: —

In the *fundus* there is secreted a juice which is very strong in acid (about .5 per cent.), and is also strong in pepsin. In the *pyloric* end there is secreted an *alkaline* viscid fluid which is strong in pepsin. The "chief cells," and the lining cells of the pyloric glands which resemble them, are especially concerned in secreting pepsin; the "border cells" are especially concerned in secreting the acid (H Cl) of the gastric juice.[4] The pepsin in the chief cells is thought to be partly in a perfected and soluble condition, partly in an insoluble form, analogous to that of zymogen in the pancreas.[5] The acid of the gastric juice transforms this insoluble "mother ferment" into the active and soluble pepsin.[6] The evidence for the above view is as follows: —

(1.) Partsch,[7] Swiecicki,[8] and others find that in the œsophagus of the frog there is secreted an alkaline pepsin-building fluid, while in the stomach the secretion is acid. The œsophageal and gastric glands are distinctly separated. Now the gland cells of the frog's œsophagus resemble very closely the "chief cells" of mammals, while the gland cells of the frog's stomach are identified with the "border cells" described above.

(2.) Snippings from the gastric mucous membrane digest the more quickly the greater the number of "chief cells" they contain.[9]

(3.) Heidenhain,[10] who is the most prominent advocate of this view, has made a series of experiments which, he considers, settles definitely the question of the function of the pyloric glands. He isolated a portion of the fundus of the stomach in eight dogs and a portion of the pylorus in six dogs, of which latter three lived. By means of fistulæ he obtained the secretion from these different parts. That from the fundus was uniformly acid, containing, as an average of thirty-six tests, .52 per cent. of free H Cl, while the average in the ordinary gastric juice of the dog is about .3 per cent. It contained pepsin in good amount. The secretion from the pyloric fistulæ was constantly alkaline, very viscid, glassy in appearance, and rich in pepsin, though poorer than the fundus secretion. Upon the addition of acid fibrin is energetically digested.

This seems very conclusive. It should be stated, however, that Friedinger,[11] Von Wittich, Wolfhügel, and a few others have, until recently, at least, denied this peptic power of the pyloric secretion, one of their reasons being that infusions of the mucous membrane are not active. According to my observations, the pyloric and cardiac portions of the stomach are more sharply distinguished in the dog than in man. So that we cannot draw inferences too confidently.[12]

(4.) My own investigations have simply a slight confirmatory value.

In the first place, in examining the stomachs of dogs killed during active digestion (and I have examined over fifty), I often noticed a large amount of thick, viscid, glassy-looking substance covering the pyloric end of the stomach. It was evidently secreted during active digestion, since I have not observed it in empty stomachs, and, therefore, was not mucus, but the same fluid obtained by Heidenhain from his pyloric fistulæ. It lined the pylorus, and extended through the sphincter. It seemed admirably adapted for lubricating the surface and helping along the passage of food. Such a function would not be superfluous in an animal like the dog, whose stomach so often contains ragged pieces of bone and foreign matters, and I cannot but think that the pyloric secretion has a lubricating as well as digestive function.

---

[1] Kupfer. Berlin. klinische Wochenschr., xv., 47, p. 703, 1878.

[2] Heidenhain and Rollett first and independently described these cells.

[3] Kupfer. Vide loc. cit. Also Grützner. Archiv f. Physiolog., xx., 8 u. 9, p. 395, 1879.

[4] Edinger, Archiv f. mikr. Anat., vol. xvii., p. 193, thinks there is really but one kind of cell, and that the border-cells are developed from the chief cells. Herrendörfer supports this, as I think, untenable view.

[5] Langley (J. N.), Journal of Physiol., vol. iii., Nos. 3 and 4, p. 269, 1882, thinks that pepsin is not found in the living stomach, but only pepsinogen. The granules of the gland cells are this pepsinogen.

[6] Langley (Journal of Phys., January, 1882) thinks there is no free pepsin in the cells, but only the pepsinogen.

[7] Partsch, C. Archiv f. mikros. Anat., xiv., 2, p. 179, 1877.

[8] Swiecicki. Schmidt's Jahrbuch., clxxiv., p. 132.

[9] Ebstein and Grützner. Pflüger's Archivs, vol. vi., p. 1, 1872. Hermann's Elements of Physiology, p. 137, 1880.

[10] Heidenhain, R. Archiv f. Physiol., xix., 2 u. 3, p. 148, 1879. Also, Breslau Arztl. Ztschr., i., 4, p. 32, 1879; also in Archiv f. Physiol., xviii., p. 169, 1878, and in Hermann's Handbuch der Physiol., V. der Absonder pv., 1879.

[11] Friedinger. Wiener Sitzungsber., October 1871. See also Hermann's Elements of Physiol., loc. cit. Ebstein and Grützner, and Klemensiewicz confirm Heidenhain.

[12] In a very recent article (reviewed in the Berliner klinischer Wochenschr.) upon the secretion of the acid of the gastric juice, it is stated again that H Cl is secreted in the pyloric end of the stomach. The statement is not sufficiently supported as yet.

Experiment. A large dog, weighing about sixty pounds, was etherized, the stomach opened by an incision near the pylorus, and the organ thoroughly washed out. A ligature was thrown around the cardia (to prevent subsequent vomiting), and another ligature at about the junction of the cardiac and pyloric portions of the stomach. Previous to applying the latter ligature half an ounce of coagulated egg-albumen, cut up into half a dozen pieces, was inserted in the fundus. A like amount was inserted in the pyloric portion, and the incision carefully closed with a continued suture. The stomach of this dog was nearly as large as that of a man, and the capacity of the pyloric and cardiac cavities was about as two to three. The dog recovered well, sat up, and moved around. He was given enough morphine to prevent his suffering pain. Six hours later he was killed, and the stomach opened. In the cardiac portion there had been absolutely no secretion of gastric juice. There was a little mucus on the surface. The reaction was neutral; the albumen was unchanged. In the pylorus there was considerable of the glairy secretion above referred to. The whole surface being carefully washed off, the fluid obtained was slightly acid. On testing it with alkali and copper in the usual way, a purple violet color, indicating peptone, appeared. The ligatures were found to be tight. That separating the cardiac from the pyloric portion was found to include a strip of the fundus from half an inch to an inch wide. A secretion from this part would explain the acid reaction. In large dogs the fundus and pyloric end are sharply marked off, the mucous membrane in the latter portion being thicker and without rugæ. The pieces of albumen were very slightly affected, the sharp edges being eaten off. The shock of the operation, which, owing to an accident, was unusually long, and the presence of the ligatures, had evidently almost entirely arrested secretion. But there was a moderate amount in the pylorus, and, as it seems to me, the fluid was of the same character as that obtained by Heidenhain.

In conclusion, we may consider it established that the fundus glands secrete an acid peptic juice and the pyloric glands an alkaline peptic juice. The latter probably has also some lubricating function. The special function of the "chief" and "border cells" in producing pepsin and acid respectively cannot be laid down so positively.[1]

VALUE OF PEPTONES AND OF PANCREATIC EXTRACTS.

I performed one series of experiments to test the comparative absorbability of peptones and beef tea in the stomach.

Pepsin and trypsin under proper conditions turn albuminous bodies into peptone. The transformation is not, however, a direct one. The proteids are first turned into closely allied bodies which have received various names (parapeptone of Brücke, anti- and hemi-albuminose of Kuhne, propeptone, parapeptone, etc.). It is sufficient for my purpose to say that after the albumen is changed, and before it becomes peptone, it is on cooling precipitable with alcohol. We may speak, therefore, of "the precipitable products of digestion."[2] We shall refer to these again later on.

Peptone itself is now agreed to be a hydrate of albumen.[8] It can be turned back into an albuminous body by dehydrating agents and prolonged drying.[4] It is chiefly distinguished by its being, as compared with albuminous bodies generally, quite diffusible (Funke). Upon this fact, as has been supposed, depends its importance as a digestive product.

As to peptone being absorbable and nutritive there can be no doubt. Catillon[5] has shown that the administration of peptone alone may increase the weight and the excretion of urea, and this whether the substance be given by mouth or by rectum. Adamkiewicz,[6] Chapoteaut,[7] Defresne,[8] Raymond,[9] Bergeron,[10] Fowler,[11] have contributed evidence as to the value of peptones. Their relative value is even definitely given. Chapoteaut makes a "conserve de peptone," of which he estimates that one drachm is equal to five drachms of beef. Sanders[12] estimates that one part of flesh peptone is equal to three parts of beef, and one part of bread peptone to three parts of white bread.

So much in favor of the peptones.

On the other hand, some observers[13] have not found the good results described by those just mentioned, who by the way are, many of them, personally interested in the manufacture of the substances they recommend. Again, there is a practical objection to almost all, if not all, genuine peptones, in that their taste is disagreeable.

Finally, it is a question whether they are very much more *absorbable* and nutritive than ordinary beef-preparations or scraped lean and raw beef. For Adamiewicz[14] has recently asserted that the diffusability of a proteid is no measure of its absorbability in the body; and that the "precipitable products of digestion," referred to above, are very easily absorbable, though not at all diffusable.

I made some experiments to test, if possible, the relative absorbability of peptones and beef extract so-called. Schmidt-Mulheim[15] has shown that peptones are rapidly absorbed or carried off in the stomach of dogs.

Experiment. Two dogs, therefore, weighing twenty pounds, were taken, and food kept from them for twenty-four hours. Gave No. 1 of beef-peptone (Gant's) two ounces; gave No. 2 of beef-essence two ounces. The preparations were both of about the same consistency.

One hour and forty minutes later both were killed by drowning, and the stomachs examined. No distinct evidence of either beef-essence or peptone could be found in the stomach or intestine. The animals had swallowed some water, and the stomachs contained several ounces of a slightly yellowish fluid, which had no smell or taste of beef. So far as it went the experiment tended to show that the beef-essence was absorbed just as rapidly as the peptone in a healthy stomach. The facts of rectal absorption and of the absorbability of non-diffusible proteids lead to the view that peptones, if more valuable than beef preparations, are so only because they may contain more nitrogenous matter.[1]

---

[1] It may be added that the secretion of Brüner's glands has been found to have peptic properties. As these glands are very similar in structure to those near the pylorus a similarity of function may also be inferred.

[2] Adamkiewicz. Virchow's Archiv, lxxv., 1, p. 144, 1879.

[8] Kossel, and Hoppe-Seyler. Schmidt's Jahrbuch., clxxii., p. 231.

[4] Heninger, A. Comptes Rendu, lxxxvi., 23, p. 1464, Juin 10, 1876.

Hofmeister, F. Prag med. Wochenschr., iii., 27, p. 271, Juli 3, 1878.

[5] Catillon, A. Bull. de Therap., xcviii., 3, p. 116, 4, p. 169, February 15, 29, 1880.

[6] Adamkiewicz, A. Die Natur u. der Nahrwerth des Peptones. Berlin, 1879. Berlin. klin. Wochenschr., No. 2, 1878.

[7] Chapoteaut, P. L'Union, 74, p. 947, Juin 12, 1880. Also Clinical Studies of the Peptones. Paris, 1881.

[8] Defresne, Th. Bull. de Ther., xcix., 1, p. 22, 1881, and Ibid., 5, p. 221, 1881.

[9] Raymond. L'Union, 24, p. 319, 1880.

[10] Buegeron, P. J. Gaz. des Hôp., 65, p. 515, 1880.

[11] Fowler, G. B. N. Y. Medical Journal, vol. xxix., p. 561.

[12] Sanders, H. (Amsterdam), Die Bedeutung der Verdauung für die Ernahrung, etc., S. L. E. a 8, 248 S.

[13] See Jour. de Therap., viii. p. 164, 1881.

[14] Vide loc. cit. Also J. Munk Physiol. des Menschen u. Sangethier, p. 169, 1881. Berlin.

[15] Schmidt-Mulheim, A., Archiv für Anat. u. Phys. (physiol. Abtheil), 1879, p. 39.

A few experiments have been performed to test the value of pancreatic extracts. Although Roberts has called attention to the possible value of such a preparation, there has been until lately no good sample in the American market, so far as I can learn. And the pancreatic ferments have hardly been used at all medicinally in this country. Recently, however, a very active preparation containing the three (or four) ferments of the pancreas has been furnished by Messrs. Fairchild & Co., of this city. It will peptonize milk to a considerable extent or entirely within an hour. Another American preparation has been found by Mr. Moriarta to be active.[2]

The question is, however, whether trypsin or the pancreatic diastase will be of any avail when given by the mouth. It has been very conclusively shown (Ewald,[3] Langley,[4] Kuhne, Mays,[5] Mourrut, Defresne[6]) that the gastric juice under ordinary circumstances digests the pancreatic ferments. Langley brings forward strong evidence to show that each digestive ferment is destroyed in the section of the alimentary tract below where it is secreted. This destruction takes place also within from a few minutes (Langley) to one (Ewald) or in some cases two (Defresne) hours, depending on the amount of ferment and the acidity of the juice.

There is, however, this hope: Defresne and others assert that gastric juice, made acid with *organic* acids, has a much less feeble destructive power, and only *suspends* the activity of the pancreatic ferments.

Now this experimenter, as well as Richet, and, I believe, some other physiologists, contend that hydrochloric acid is secreted chiefly or entirely in the first part of digestion. If, therefore, the pancreatic ferments be given some time after a meal, "guarded," perhaps, as Roberts suggests, with bicarbonate of soda, their activity will not be destroyed.

But, on the other hand, there is very strong evidence that in reality the *organic* acids are secreted first, and that hydrochloric acid does not appear for nearly an hour after the ingestion of food.[7] At the best the pancreas ferments must be given with uncertainty, therefore.

Besides, it should be remembered that the stomach is the great organ for digesting proteids, and the attempt to throw any great load upon the pancreas is but a makeshift. According to Bechamp's[8] experiments trypsin is less powerful than pepsin, and others have confirmed his opinion. When very large amounts of vegetable diastase are given, as in the malt extracts, it is possible that some passes into the intestine undestroyed.

In conclusion, I would say that peptones are valuable, but more because they contain much nutriment than because they are very absorbable. They increase metabolism.

Pancreatic extracts have not been proved to be of value when given medicinally, and they are probably destroyed in the stomach. They may be of much use, however, in partially peptonizing foods before such foods are used.

◆

SOME FACTS EXPLAINED BY MODERN PATHOLOGY.

BY HUGO ENGEL, A. M., M. D.,

Fellow of the American Academy of Medicine, etc., etc.

The old "Humoral Pathologists" were by no means so very wrong. They imagined the existence of a morbid fluid, causing the process of disease according to the locality this fluid either selected for its seat or where it was deposited *nolens volens*. So in cases of acute articular rheumatism, if the inflammatory swelling abruptly left the affected joint and the malady assumed the character of cerebral rheumatism, they said that the morbid rheumatic fluid had been carried by the circulation from the joint to the brain. This is only one instance of the old theory of humoral pathology. They gave to the word "metastasis" its modern definition. They recognized, however, the morbid agent as an entity, and while, with their limited means of investigation, they were not able to detect the real causing element, they supposed — and with perfect right — that the pathogenic substance was a foreign body, a something not belonging to the economy of the healthy animal organism, but either developed in the latter by some unknown process of decomposition, or carried from the surrounding atmosphere by way of the respiratory passages, or with fluid or solid nourishment through the alimentary canal into the human system.

Modern science at last has been able to demonstrate *ad oculos* the micro-organisms which cause so many diseases, and which induce a different train of symptoms according either to their own natural peculiarities or to the part of the organism which they have selected as their proper habitation. These parasites have their preferences. While some find the mucous membrane of the throat suitable to their further development, others thrive best where they can get the pure arterial blood from its first source, in the capillaries of the parenchyma of the lungs; others again seem to like the unadulterated nourishment, as it is ready for them and prepared in the absorbing vessels of the intestinal canal, and again others are not so very particular; they settle down wherever accident has carried them and, as if not satisfied with their abode, they generally try to leave it soon, under great disturbances created in the system at large, by the skin. But they all have one quality alike: sooner or later they feel and make themselves at home (except those last mentioned), and if the tissue, in which they are determined to reside does not willingly accommodate itself to them, they accommodate the tissue to themselves; and in either case the inevitable consequence is that morbid change — first local, but on account of the rapacity and great power of reproduction of these microscopic organisms, presently general — which characterizes the disease caused by these destroyers of the animal kingdom, and especially of the enlightened human race, and of the domestic animals so necessary for the existence of civilized mankind.

---

[1] In estimating the value of the various beef and beef peptone preparations, it should be remembered that a healthy adult requires about four ounces of albuminous matter alone per day. There is nearly this amount in a pound of beef. The nutritive constituents of a pound of beef, therefore, cannot be gotten into much less than thirty teaspoons. The absurdity of the claims made for some beef preparations, for example, "one teaspoonful represents the nutritive properties of a pound of beef," etc., is therefore apparent.

[2] Mr. D. C. Moriarta suggests in New Remedies, May, 1882, the following as a standard test of the proteolytic power of pancreatic extracts: Mix five grains of the pancreatin with twenty grains of bicarbonate of soda and four ounces of water; add to this mixture one pint of milk previously warmed to 140° F., and set aside two hours in a warm place. If the milk is completely peptonized, so that acetic and nitric acids do not produce precipitates, the pancreatin may be considered of standard strength — in absence of official standard. If five grains is found insufficient, a larger quantity may be taken in a second experiment; or rather, to save time, several experiments may be made at the same time with five, ten, twenty-five, and fifty or one hundred grains of the pancreatin.

[3] Ewald, C. A. Vide op. cit. Appendix.

[4] Langley, J. N. J. N. Journ. of Phys., January, 1882.

[5] Mays, K. Untersuch. a. d. physiolog. Inst. d Universt. Heidel., 3, 378.

[6] Defresne, Th. Etudes Experimental. sur la Digestion. Paris, 1880. Baillière et Fils.

[7] See in support of this view: Von den Velden, R. (Strasbourg), Ztschrt. f. Physiol. Chem., iii., 3, p. 205. Also Deutsches Archiv f. klin. Medic., xxv., 1, p. 105, 1879. Uffelmann, J. Deutsches Archiv f. klin. Medicin., xxvi., 5 u. 6, p. 431, 1880. Fleischer, R. (Erlangen), Jahresbericht. d. Gesellsch. f. Natur. u. Heilkun. in Dresden, p. 77, 1881.

[8] Bechamp, A. Comptes Rendus, xcii., 3, p. 142, 1881.

The truer a theory, the more clearly facts can be explained for the solving of the mystery of which the theory has been called into life; or, in other words, if for the purpose of elucidating the cause — the why and wherefore of certain occurrences — a theory has been set up, the more such occurrences are explained by this theory, the less is left in mysterious darkness by it, the more correct the theory will be; and as long as every fact connected with the latter finds its explanation by the same, so long will this theory have the advantage over all others, and will, in its special branch of science, be the dominant theory of the day. Humoral pathology left too many facts unexplained; "poisoning" of the nerve-centres, "poisoning" of the life-giving, circulating fluid, were ideas which were not clear and did not penetrate into the real origin of matters. Cellular pathology helped to enlighten our mind greatly on the complicated processes of the different morbid lesions, but it was not till the discovery of the micro-organisms as the causing element of the great class of infectious diseases, that we were able to fully understand many heretofore unexplained facts.

It will be our object in the following to mention a few of the more important points, and to bring together in causal connection certain morbid processes, formerly mysterious, and certain phenomena, till then not understood, with this modern theory of the pathology of infectious diseases.

For a long time it had been observed that when two persons had been married, and the one, who perhaps came from a tubercular stock, say the husband, had at last fallen a victim to tuberculosis, the surviving wife would the sooner be attacked by the same disease, even if she always had been in perfect health and without any hereditary tendency, the more she had come in contact with her husband during the time he had suffered from the phthisical malady. This fact has been so well established that if the wife of such a husband had been sleeping the last year of his life in the same bed with him, if she should have nursed him and swept the room in which he lived, in nine cases out of ten the prognosis would become true that the wife will die within three years from the same complaint. That therefore tuberculosis must be a contagious disease was clear, but the fact was then only fully explained when Koch[1] was able, by a peculiar coloring process of his own, to visibly demonstrate the tubercle-bacilli as the pathogenic cause of tuberculosis. He showed that the phthisical sputa expectorated and derived from a tubercular cavity were full of these bacilli, and that such sputa, even if perfectly dry, powdered, and kept for the period of several months in the common temperature of rooms, when wafted into the air and inhaled by guinea-pigs, as certainly caused tuberculosis as if these animals had been directly inoculated with true tubercular matter. He was able to prove even in these dust-particles the presence of the tubercle-bacilli, and in a state ready for reproduction. But with sputum not containing these bacilli, no matter from what other source derived, he could never produce the same disease, while his experiments with sputa containing these micro-organisms never failed in a single instance to cause tuberculosis in animals that inhaled them.

Have we not here a plain and undeniable explanation why the surviving member of a married couple will fall sooner or later a victim to the same tuberculosis which had already destroyed the life of the other member? Koch was also able to prove, from the remarkably slow growth and the slow development of these bacilli, how it is that the disease under certain circumstances has such a long period of latency, of incubation, runs frequently so slow a course, and then again, how by the death of the bacilli it may come even to a stand-still. Why, notwithstanding these tubercle bacilli, which especially in large cities must be very abundant, so many persons escape, is a question not so difficult to answer. First, there are persons enough who fall victims to tubercular consumption; one seventh of all people born, and one third of all in the prime of life, die of this frightful malady; and second, some individuals possess a vitality, a power of resistance, strong enough to prevent these micro-organisms from taking hold in their system. There exist, without doubt, specially favoring conditions under which the tubercle-bacilli, as well as all other bacteria, may find a good culture-soil in the system invaded and flourish, — as interruption of the continuity of structure in the mucous membranes, catarrhal affections, alterations in the epithelium, a peculiar composition of the blood, etc., etc. The same circumstances which protect some persons from the many infectious diseases secure others undoubtedly against the inroad of tuberculosis.

That, however, only comparatively few escape may be inferred from the statistics above mentioned, and from the following. If we remember that many patients suffering from tuberculosis are cured of this complaint, or that others, after the disease has come to a stand-still in them, later die of some other malady, and that frequently the interests of the family of the deceased, as life insurance, etc., induce the issuing of a certificate naming another lesion as cause of death, and that ignorance often may do the same, we shall not be so very wrong in supposing that the number of deaths by tuberculosis, as given us by statistics, does by no means represent the actual number of persons who, at some time or other of their life, had been attacked by tubercular phthisis.

That so many of the human race suffer from this complaint cannot be wondered at, and will be explained if we look for a moment at some of the other results of *Koch's* researches, and of those of some of his co-laborers and successors in this field, as *Cohn-*

---

[1] Deutsche Medicinal Zeitung, iii., 16, 1882.

heim, *Baumgarten*,[1] etc. Not alone that they showed us the great danger of allowing phthisical sputa to dry and to spread, one might say, all over the earth, forming in this way, perhaps, the greatest source of infection, but they demonstrated by their investigations that almost all our domestic animals, from the horse and cattle down to chickens and pigeons, were often attacked by tuberculosis; that it was very frequent among them; that the so-called *Perlsucht* was simply another name for the same disease; that all so-called cheesy degenerations were neither more nor less than the addition of tubercle-bacilli to an already existing inflammatory process; that undoubtedly chickens affected with tuberculosis were frequently eaten, especially as in these, in the beginning, the complaint was not easily recognized; and they proved, by their experiments, that animals fed on such meat, all died of tuberculosis, and lastly, that the milk of cows suffering from tubercles contains the characteristic tubercle-bacilli, and is, therefore, a prolific source of the contagion.

Is the frequency of tuberculosis in the human race now explained or not? Shall we still wonder if suddenly in a family, till then free of the taint, this dreadful disease breaks out, and that after the first others soon fall victims to it? The light thrown upon this subject by these indefatigable investigators must stimulate us in all such cases to detect the source from which the infection originally was derived. Our present knowledge must incite us to increase more and more our power of preventing maladies, and one of the greatest triumphs of modern medicine will be when we have succeeded not only in curing such infectious diseases by discovering bacillicides, but in stamping out this malady, and driving its living cause from the face of the earth.

How long have we been in the dark in finding a cause for the fact that different epidemics of the same disease differ in their severity and character; that the first attacked in a locality by some acute infectious disease, epidemic at the time, generally represent the malady in its worst type, and that towards the end of the epidemic in a given district the complaint assumes a far milder form? The researches of Pasteur especially have explained this fact. If, for instance, a drop of blood of an animal suffering from anthrax is taken and added to a test-tube full of pure beef or chicken tea, and this glass is hermetically closed and kept for any length of time at the common temperature of rooms, and if, say, after a month or two, one drop of this infected solution is added to a fresh quantity of beef, mutton, or chicken tea, similarly preserved and kept, and if this experiment is repeated any number of times, one drop of the solution last prepared will just as certainly cause the severest form of anthrax in an animal inoculated with it as a drop would of the undiluted blood of such an infected animal.

But expose each solution for about a week or two to the action and influence of the atmosphere, before a drop is taken from it to make a fresh solution, and repeat the same experiment in a similar manner a great number of times, it will then be found, provided each solution has been exposed for the time mentioned to the atmosphere, that each succeeding solution, on inoculating an animal with it, will cause a milder case than its predecessor, and at last a solution will be obtained which, while producing no visible general disturbance, and almost none or at least a very trifling local one, will as effectually protect the animal inoculated with it, for a specified length of time, from an attack of anthrax, as vaccination protects a human being against variola.

These experiments explain why some epidemics are severer than others, why the first victims generally die, and why persons at last may become acclimatized and not be affected any more by infectious diseases specially prevalent in a given locality. In a severe epidemic of yellow fever, for instance, the poison of this disease is in the beginning of an outbreak most powerful; at last it is not able to cause the fever any more, but is still of a sufficient strength to inoculate those who have escaped it, and who continue to reside in the infected locality, effectually enough to guard them from an attack of the disease should it reappear. The secret of acclimatization is thus explained.

It might be well in localities like New Orleans, Havana, Memphis, etc., where yellow fever may be said to be endemic, to take a drop of blood from a person suffering from the disease in its severest form, and while the malady is at its acme, and to form solution after solution, in the manner indicated, and under exposure to air, as described, till at last a solution is obtained of which a drop, if injected under the skin of a sensitive animal, would not cause more than the slightest local irritation. At the approach of an epidemic, or in the beginning of its outbreak, non-acclimatized persons should be inoculated with this solution, and do not doubt that, if analogy warrants conclusions, such a procedure would protect these persons as effectually against yellow fever as vaccination does against small-pox. The experiment might be made so as to bring no danger from the operation to the inoculated individual.

The investigations of Klebs with reference to the bacillus typhosus have, I think, fully demonstrated that the lung and brain complications of typhoid fever, and the enlargement of the spleen as well as the oozing hæmorrhages, are not accidental occurrences, but that they are caused by the presence of the bacilli in the lung tissue, in the pia mater of the brain, in the spleen, and in the perivascular spaces of the capillaries of the intestines. We know now that an epidemic of so-called typhoid pneumonia is simply an epidemic of typhoid fever, where the lung complication forms the disease, and where the abdominal symptoms are mostly absent. Klebs found, in such an epidemic at Prague, that the infection had solely been caused by inhalation; the mucous membranes of the nose, pharynx, air passages, and the lung tissue itself were full of the bacilli in every stage of development, while in the intestines a few only could be detected. But commonly the infection takes place by the water or the milk we drink, or by the food we eat, and therefore the abdominal symptoms of enteric fever are usually the most developed, and it is from these that the bacilli may travel to other parts of the body; while if the infection has been caused by inhalation, the primary lesion is found in the lungs, and from here the bacilli reach remoter parts of the system. This explains also why diarrhœa in typhoid pneumonia is — and justly so — very much dreaded; this diarrhœa is simply an indication of a more general infection, of the bacilli not having settled alone in the lung tissue, but also of their presence in large masses in the intestines, increasing thereby the danger of the disease.

For the development of the different forms of necrosis, as so frequently observed in diabetes mellitus, many causes used to be given. Want of water in the tissues or in the blood, and the substances circulating in the latter, as sugar, aceton, oxalic acid, etc., etc., have all been named as causes. Kraake,[1] however, has proven that for the serious character of these gangrenous and ulcerative processes the presence of air, or rather the presence of bacteria in the latter, is essential, and he reports in the journal cited the following case in support of this view: —

---

[1] Centrlbl. f. d. Med. Wissenschft., 1882, No. 15, page 1, et seq.

In a diabetic man, fifty-three years old, an enormous carbuncle formed on the left side of the head. The large quantity (five litres) of urine passed daily contained four sixteenths per cent. of sugar. The throwing off of the gangrenous particles after the carbuncle had been laid open with the knife went on favorably, with little increase of temperature. But suddenly, apparently after a slight pressure, on the right biceps and in the left side of the abdomen, hard infiltration was felt; a week later fluctuation followed; the pus was let out; the patient became worse, and twenty-four hours later he died. In the pus were found immense numbers of micrococci; large masses of diplo- and streptococci were observed between the muscular fibres and in the walls of the abscess cavities, and the lungs and spleen were full of them.

Weigert[2] reports a similar case, where, within a short time, an enormous quantity of bacteria was spread over the whole body. While evidently the same causes produce a development of micrococci in a person affected with diabetes, as in any other individual, the blood of such a patient presents, without doubt, specially favorable conditions for the rapid propagation of them, and we have hereby explained the fact why such an ulcerative process, if once begun in a diabetic person, leads so rapidly to a fatal end. We learn from this that in such an individual we must pay the utmost attention to the aseptic treatment of the smallest wound; that even a simple scratch must not be neglected, and the minutest details of a perfectly antiseptic procedure must be insisted upon, if we wish to prevent the fearful invasion of the whole system by bacteria, and to save the life of the patient.

These bacteria have been met with in all septic diseases. There seem, however, to exist special forms of micrococci for every septic process, from the plainest septicæmia to the worst case of puerperal peritonitis. It has been observed by Karewski[3] that the lochial discharge is a fluid in which bacteria especially thrive; that a drop of it exposed to the air outside the vagina for a very short time is immediately infected and soon alive with them, and that they very rapidly propagate themselves, and keep their vitality a long time, even under adverse circumstances. Some lochial discharge, free from bacteria, was kept under aseptic precautions. Repeated examinations proved its continued aseptic condition. Karewski then examined with his finger the sexual organs of a woman suffering from puerperal fever, which ended fatally. A pure culture-fluid in which he dipped this finger became full of bacteria. After two weeks, having washed his hands frequently during all that time, and in the usual manner, with soap and water, he brought the same finger in contact with a part of the lochial discharge, and then cleaned the finger thoroughly with a ten per cent. solution of carbolic acid. After having washed the latter off again a number of times he brought it in contact the next day with the other half of the aseptic lochial discharge. In a week the first lochiæ were full of the same bacteria, their development being rapid; the second half was still an aseptic fluid, both having been protected in the usual careful manner against the influence of the atmosphere.

Can we wonder why puerperal fever, if once broken out in a hospital, spreads so rapidly, and that it is sometimes best to tear such a building down? Do Karewski's observations not explain why physicians sometimes have remarkably bad luck with the women they deliver, one after the other dying in succession of the same puerperal fever? Does it surprise us that since the more general introduction of aseptic procedures we hear less of puerperal fever? Is a physician not criminally neglectful who does not use all possible antiseptic precautions when delivering a woman? Those old physicians are right who contended that such women pass with the greatest safety over their confinement in whom the natural delivery has least been meddled with, and who have, as concerns the sexual organs and their manual examination, been left alone. Why are cases more dangerous and more frequently followed by puerperal fever in which the forceps have been used, even if only to accelerate the passage of the head through the vulva in a normal birth? How many of these instruments are kept strictly aseptic or are made so immediately before their use?

Do these investigations and discoveries not open our eyes to a great many evils which it is in our power to remedy?

A great deal has been done already, but still more has to be achieved. With the progress of our knowledge in pathology our art of healing has so far not quite kept even step. Certainly I have mentioned in the foregoing a few instances only of the clear explanations modern pathology has given to hitherto obscure facts, but I shall have gained my purpose if I have been able to draw the attention of others in the same direction. Only a thorough knowledge of all facts and circumstances bearing upon and surrounding a case can produce in a physician that certainty of action which ever will be wanting where speculation takes the place of established facts, but which alone can make us successful in our endeavors to "heal all ills human flesh is heir to."

In England, France, and Germany, the whole population begins already to reap the benefit of these important achievements of modern pathology. In Berlin a commission exists, the members of which are the most prominent physicians, lights in our science and art, who have to instruct the government in the principles upon which public hygiene should be based; they form a coödinate branch of the government, and their decrees are carried out with all the machinery the executive authorities have at their command. In this way, from one common centre, the regulations are distributed to all medical boards established in every state, province, city, and county, and they all supervise the execution of these laws, report their effects, and in return again advise the Central Commission.

— In Berlin they think Pasteur the best man after Koch, as we learn from a correspondent lately there.

---

[1] Centrlbl. f. d. Med. Wissensch., 1882, No. 14.

[2] Ibidem.

[3] Zeitsch. f. Geb. and Gyn., 1882, No. 7, p. 331, et seq.

GLYCOSURIA.[1]

BY OSCAR C. DEWOLF, M. A., M. D.,
Professor of State Medicine and Public Hygiene, Chicago Medical College.

Although glycosuria does not frequently fall to the care of general practitioners, it has befallen me to have charge of several cases directly and indirectly, naturally awakening a solicitude not to be appeased by our inchoate literature of the subject.

The fact that one half of these cases undoubtedly originated in neuroses of a mental type could not fail to impress me with the conviction that the diabetic centre in the floor of the fourth ventricle might have become involved by either an extension of a lesion originating above this point or by direct congestion thereabouts. The patients mentioned are engaged in large manufacturing and mercantile enterprises, and uniformly their glycosuric troubles began after having been subjected to great mental strains. This set me to overhauling the subject with the results which I hesitatingly submit in condensed form in the shape of conclusions at the end of this article.

Prout was first in calling attention to the phase of glycosuria known as diabetic coma. The later workers in this field (Petters, Sanders, Hamilton, Kussmaul) somewhat uniformly overlook the neurological aspect of the dyspnœa which ushers in the coma. It is very evident that a nerve degeneration which could cause the interference with the liver functions, and thus induce diabetes, could as well extend to the pneumogastric centres or fibres, and thus produce the respiratory insufficiency directly through failure of innervation.

Petters urged the acetone poison theory as a cause of the coma, but Sanders and Hamilton[2] satisfy us that acetonæmia may exist without the coma. It is sufficiently proven that the blood in these coma cases does evolve acetone, but that it is a factor in the production of dyspnœa seems to have been disproven. Ruppstein[3] gives an equation illustrating the formation of acetone, alcohol, and sodium hydrogen carbonate from sodium ethyl diacetate. In this decomposition the latter absorbs two molecules of water, which fact is again indicative of the abstraction of the blood serum alluded to in another part of this paper as productive of polydipsia.

Quincke[4] and Steel, cited by Gamgee[5] mention two cases where the coma was transitory, which would disparage the neurological view and lead us to search for a chemical or at least less organic cause.

Something in this direction, not alluded to by others, occurred to me when considering the power possessed by animals to deoxidize saccharine substances in fat conversion. By taking a certain number of molecules of carbonic acid, water, and oxygen from glucose, the elements of the ordinary forms of fat are furnished: $20C_6H_{12}O_6$ (sugar) $= 2C_{57}H_{110}O_6$ (stearin) $+ 6CO_2 + 10H_2O + 43O_2$. Quincke, who rejects the acetonæmia theory, concludes that the comatose condition is due to a toxic action and not to a suddenly developed nervous lesion. Gamgee calls attention to the remarkably intense fatty infiltration of the liver in two cases in the Royal Infirmary. Hoppe Seyler[6] states that the proportion of fat increased greatly in the blood in four cases of diabetes.

Notwithstanding the note that in one of the Infirmary cases the blood did not seem to be particularly venous, I cannot help believing that the liberation of such great quantities of carbonic anhydride in fat formation was a direct cause of the coma, at least the view is submitted to physiological chemists as worthy of attention. Then, again, the observations of Foster[7] in support of the acetone theory were instrumental in establishing the lipæmic condition of the blood in diabetes, and Czerny's account of symptoms in a case of fat embolism led Sanders and Hamilton to advance the theory that "the peculiar terminal dyspnœa and coma of diabetes are due to lipæmia and fat embolism rather than to acetonæmia. Setting aside the acetonæmia theory of diabetic coma as untenable, but being forced to acknowledge that the neuropathic and chemical explanations suffice in some cases, it would seem to justify the view that this diabetic terminal disorder had a multiple origin. In some cases we may conceive that the direct cause is the CO_2 poisoning the blood in lipæmia, a view warranted by the fatty infiltration of the liver found in the cases cited by Gamgee; that fat embolism from lipæmia may also be a cause in one class of cases, while pneumogastric nervous interference mainly by progressive degeneration either of centres or nerve tracts may account for another series.

A recent contribution against the acetonic idea, the preliminary communication by Dr. Rudolf von Jacksch,[8] may be cited as embodying the following conclusions regarding acetonuria in fever generally: First, a red color is produced in the urine by the addition of chloride of iron not only in diabetic coma, but during the course of diabetes without coma, and with great regularity in the eruptive stage of some acute exanthemata. Next come Siebold and Bradbury,[9] who state that instead of acetone it is aceto-acetic ether that is found in diabetic urine, and setting forth the statements of Tichborne and Attfield, it seems by no means established that the chemists are certain of their tests for either the one or the other of these alleged glycosuric accompaniments.

Lubimoff[10] found "the inferior ganglion of the vagus-trunk atrophied and abnormally rich in pigment," and Henrat[11] once observed a tumor of the right vagus at the level of the root of the lung." Though in neither of these cases is there mention of coma, it is worth while to admit the strong probability of this aspect of the disease not to be due to any single cause in all cases, but often to separate or conjoint causes, among which, in my opinion, the CO_2 poisoning may rank first, fat embolism second, and pneumogastric failure third. On the matter of fat and glycogen-production from sugar and starch in the animal body an interesting chapter may be found in Foster's Physiology, recently published.[12]

Before dismissing the consideration of fatty infiltration it would be well to call attention to the statements of Beale, Frerichs, and others, that hepatic fat diminution is the rule in glycosuria, and that infiltration occurs in the corpulent, while fatty degeneration of the liver may occur as the result of cachexia and pulmonary phthisis.

---

[1] Concluded from page 221.

[2] Gamgee, Physiological Chemistry of the Animal Body, vol. i., page 169.

[3] Centralblatt, 1874, No. 55.

[4] Weber Coma Diabeticum, Berliner klinisch Wochenschrift, 1880, No. 1.

[5] Op. cit.

[6] Physiologische Chemie, page 482.

[7] Diabetic Coma Acetonæmia, British Medical Journal, 1878, vol. i., p. 78.

[8] Prager Medicinische Wochenschrift, October 5, 1881.

[9] Martin's Chemists and Druggists' Bulletin, January, 1882.

[10] Virchow's Archiv, vol. lxi., p. 145.

[11] Bull. de la Soc. Méd. de Reims, 1874, No. 13 (cited by Senator).

[12] Foster's Physiology, edited by Reichert, American edition, 1880, p. 590, et seq.

As to the cause of the polydipsia, a view that at one time I regarded as original with myself alone, but which I find has been already urged, seems to satisfy the conditions, but the view has not been properly worked out heretofore.

Setting all theory aside, the simple fact remains that there is an excess of sugar produced in the system in this disease; it is also undeniable that this sugar has an amylaceous origin. Now, if we take the chemical formulæ of starch and sugar it is obvious that in the conversion of the one into the other *water is abstracted* from the system. Thus $C_{12}H_{20}O_{10}$ (starch) $2C_6H_{12}O_{61}$ H_2O (starch sugar) differ by $4H_2O$, and in the formation of two molecules of dextrose (Kekulé's term for starch sugar, Miller suggesting the word glucose as generic) from one molecule of starch four molecules of water disappear. The great thirst in cholera is known to be due to the loss of the watery constituents of the blood, and the diabetic thirst may be similarly caused. That the great amount of fluid ingested in the latter disease should fail to assuage thirst is not to be wondered at when we consider that the sugar production goes on comparatively at a distance from the intestine in viscera and vessels not readily accessible or to be rapidly reached by draughts of water intended to resupply the abstracted serum. This process may be compared to the attempt to extinguish a fire in some inner room of a house by deluging the building and all the other apartments with water.

The new science of organogeny promises to give us clearer ideas of hepatic functions as well as broader views of man's position in the animal scale. Heretofore we have been compelled to rest content with the meagre details set forth so voluminously by Richard Owen, but upon which Huxley improved immensely. Gegenbaur inaugurated with Hæckel an era in these matters, and to-day the appearance of Balfour's second volume on embryology, devoted more especially to vertebrates, is hailed by biological and pathological students everywhere with satisfaction.

Comparative cellular pathology and histology generally, in connection with a less narrow physiological chemistry, will achieve wonders in the future toward a better understanding of the life processes.

When we consider how much vagueness there is in the writings of those who have sought an explanation of the office of the liver, as well as of other structures in the animal economy, a vagueness prevailing in the works of such as Claude Bernard and Frerichs, is it not time to think that want of catholicity is at the bottom of our ignorance? Of course it is not to be expected that one or a score of investigators can cover a universe of comparative histological observations, but it is safe to assert that until organogeny has been thoroughly worked out in other vertebrate forms than man we are doomed to narrow-minded views of the significance of important viscera.

CONCLUSIONS.

Glycosuria is a more appropriate name for the disease known by the several designations diabetes mellitus, mellituria, etc., though glycæmia is the true pathological condition.

The literature is more voluminous than satisfactory, and consists mainly of repetitions of the older views.

Too many changes have been rung upon the necessity for abstinence from amylaceous diet, urine analysis, etc., and too little has been accomplished in the way of autopsies or a consideration of the probability of rational chemical treatment.

Statistics are lacking in establishing heredity and other matters as factors. Climatic influences do not seem to have been considered at all, and especially have the neurological bearings of the disease received too little attention except in the routine of "diabetic vaso-motor tracts.

Similarly the liability to the disease of sexes and at different ages is only apparently settled.

Too many uneliminated sources of error have been mixed up with the records as far as I have examined them.

The causes of glycosuria are multiple, hence the necessity for individualization in diagnosis and treatment.

The Bernardian view that "glycogenesis is a normal physiological phenomenon accompanying all the manifestations of life in animals and plants," deserves serious consideration in connection with accordant modern biological revelations. The tendency has been to consider the disease from the pathological stand-point alone. Nevertheless Bernard does not seem to have laid any stress upon the liver being simply the sugar-forming organ *par excellence* only, and that every organ, in fact every cell, possesses this function to a greater or less extent.

Comparative histology and physiological chemistry promise to become powerful aids in clearing up obscure points in disease, and inasmuch as we are to consider glycæmia from the physiological rather than the pathological stand-point, especially should the recent science of organogeny be cultivated.

REPORT ON PROGRESS IN THE PATHOLOGY OF DISEASES OF THE NERVOUS SYSTEM.

BY S. G. WEBBER, M. D.

CEREBRAL LOCALIZATION; SENSORY REGION.

THEODOR PETRINA[1] reports six cases of his own in which there was disturbance of sensation in the limbs which had lost their motor power, where also after death there was found only lesion of the cortex of comparatively old date, such that the influence of shock or pressure could be excluded, and the symptoms could be referred directly to the lesion. Where sensation was affected the lesions were limited to a rather narrow region. The lower part of Broca's convolution, the convolutions of the Isle underlying this, the lower third of the anterior central convolution, the anterior upper surface of the first temporal convolution, the upper third of both central convolutions, and the superior parietal lobule, that is, all the convolutions in the psycho-motor zone around the fissure of Rolando.

The loss of sensation from lesion of these localities consisted in a more or less decided weakening of the sense of pressure, or of pricking, or of locality and temperature, or of several of these. The sense of taste, smell, and color was not affected. These "cortical" anæsthesias differ in this limitation of loss of sensation from those hemianæsthesias which follow a destruction of the posterior third of the posterior limb of the inner capsule (the *carrefour sensitif* of Charcot).

---

[1] Ueber Sensibilitäts Störungen bei Hirnrindenläsionen. Zeitschrift für Heilkunde, ii., 1881, p. 375.

Cortical lesions of the occipital convolutions give rise to no sensory paralysis. He concludes that the most anterior portions of the frontal convolutions and the surface of the entire occipital lobe are not the seat of sensory centres.

PARAMYOKLONUS MULTIPLEX.

N. Friedreich[1] reports a case of clonic spasm in a man fifty years old; the muscles affected were several in both upper and lower extremities, the affection being symmetrical on the two sides. During sleep and voluntary motion this spasm ceased; the motor power and coördination were not affected. The nutrition and electrical irritability of the muscles were normal. Sensation was normal; the cutaneous reflex irritability and patella and tendon reflex were increased.

The spasm consisted of a short and rapid, frequently recurring contraction of the biceps and triceps brachii, and supinator longus of both arms; of the vastus externus and internus and rectus femoris of both legs; also, less markedly, the adductor, the biceps femoris, and semitendinosus. These muscles contracted in their totality, not with fibrillary contractions, though the limbs were not always moved. The contraction of any one muscle was not isochronous with the contraction of other muscles, but each moved independently. Forty to fifty contractions of one muscle occurred in a minute while the spasm was most severe; ten to twenty when least severe.

The cause of this affection was a severe fright received five years previously by the bursting of a circular saw, though he was otherwise uninjured by the accident.

A very few applications of galvanism were followed by a cessation of the spasm.

He considers that the seat of the affection was in the spinal cord; that certain groups of ganglion cells of the anterior cornua had acquired a condition of increased irritability.

CAN POTT'S DISEASE OF THE SPINE OCCURRING IN CHILDHOOD BE CURED WITHOUT DEFORMITY?

O. H. Allis,[2] reviewing the causes which give rise to deformity in Pott's disease; the change in the position of the bones, of their spinous processes; also the defect in their growth resulting from injuries to their apophyses, concludes: "The deformity is consequent upon unequal development, and no art can prevent it. The arrest of disease is at best a compromise. In the disease under consideration the child, from a sickly, half-palsied object of commiseration, can be made sound, happy, and useful, and it is folly to ask more."

PARESIS OF OPPOSITE LEG IN HEMIPLEGIA.

Brown-Séquard[3] stated that he has found since 1860 in every case of nearly complete hemiplegia depending upon a unilateral encephalic lesion, that there is at least a slight paralysis of the opposite leg, considered healthy. He is certain of this, not only from the difficulty which the patient has of standing upright on that leg, but also from measuring the force of the voluntary motions of the thigh, the leg, and the foot by the aid of Axenfeld's dynamometer. Comparing the strength of the legs in patients attacked with hemiplegia of considerable degree, but retaining all their intelligence and power of will, with the strength of a healthy person of same age and sex, there is always considerably less strength on the sound side in the hemiplegic. The arm is almost always affected too, but in less degree. Hence in severe hemiplegia due to unilateral cephalic lesion there is often besides the *crossed* paralysis a slight *direct* paralysis.[4]

NERVE STRETCHING IN LOCOMOTOR ATAXIA.

Dr. Langenbuch[5] has had an experience with about one hundred cases of nerve stretching in locomotor ataxia. The value of the result depends upon (1) the age and strength of the patient; (2) the character and stage of his disease and its complications; (3) upon the appropriate conducting of the operation and success in obtaining a rapid healing of the wound; (4) the subsequent treatment.

He refers to the severe strain which it is to lie in bed quiet for eight to fourteen days, and that it requires a certain amount of strength to bear this and also the shock of the operation. He has found that ataxic patients do not bear well lying still, and soon lose strength. Hence old and decrepit patients are not suitable for operation, and should be operated upon only with a guarded prognosis. It is also well not to operate upon too corpulent patients. The habit of using morphia is also unfavorable to success. With females it is best to operate immediately after the catamenia.

It is more difficult to judge as to the state of the disease, whether it is such as to render an operation proper. He says: "I have operated in very advanced cases, which to all appearance were very unfavorable, where the patient had not left his bed for two or three years, and have seen the patient get on his feet again; also, I have been able to accomplish only very little in relatively early cases which had neither much pain nor any symptoms of bladder disturbance. This uncertainty of prognosis as to the result of the operation will continue as long as we do not know the extent of peripheral and central nervous tissue which is irreparably diseased or otherwise, and the nature of the histological changes."

The advanced stage of the disease he does not consider in itself an absolute contraindication for the operation, for we can never know whether the nuclei of the affected nerve fibres are destroyed or remain so as favor the restoration of the fibres. But in old cases the prognosis should be cautious.

Since the favorable result of the operation cannot be determined under half a year or longer, our experience is as yet defective.

The place for the operation is of great importance. If the sciatic nerve is exposed near or under the glutæi, fine muscular branches of the nerve may be torn across, and there may follow atrophy of the flexor muscles. He exposes the nerve in the middle of the thigh, under the belly of the biceps, where no muscular branches are given off.

There is danger, if the nerve is disturbed too much, that it may be caught in the scar and suffer compression from the contraction of the cicatrix.

---

[1] Virch. Arch., 86, 1881, p. 421.

[2] Philadelphia Medical Times, January 28, 1882, p. 273.

[3] Soc. de Biol., January 21, 1882.

[4] Gaz. Hebd., January 27, 1882, p. 62.

[5] Ueber Erfolge und Misserfolge der Nervendehnungen bei der Tabes und ihr verwandten Krankheiten. Berliner kl. Wochenschr. March 20, 27, 1882, p. 179.

He makes an incision through the skin eight or ten centimetres long on the posterior surface of the thigh in the middle of its height and somewhat to the inside of the middle line. After dividing the adipose tissue, the posterior cutaneous nerve is seen under the fascia and is to be put aside without injury; the biceps and semitendinosus are to be separated with the knife; the deeper connective tissue is to be taken up by forceps and divided by knife, not torn, until the nerve is laid bare; veins must be avoided. The nerve is placed between two well-disinfected sponges, to avoid pressure, and then taken between thumb and index and middle finger.

Experimenting on the cadaver, he found that when the sciatic was stretched only slightly the traction could be felt in the spinal canal. Severe stretching is not desirable, but only moderate. The operation is to be performed antiseptically, a drainage tube being kept in for thirty-six to forty-eight hours. The subsequent treatment must be followed carefully for a long time. After the patient is able to get up he must be trained in standing and walking with moderation and care not to overtax himself; he must be exercised in standing and walking with his eyes closed.

Massage of the legs, especially in the vicinity of the wound, electricity, and warm baths are valuable adjuvants, as well as iodine and iron internally.

Where there is improvement not all the symptoms are equally relieved. The author does not give any *résumé* of the results obtained.

This paper, read before the Berliner Med. Gesellschaft, January 25th, gave rise to a discussion in which Westphal mentioned nine cases of ataxia, five of neuralgia, and several others, and said "according to my experience, which includes some cases upon which Herr Langenbuch operated, it follows that in no case of so-called spastic paralysis, of tabes, and of paralysis agitans has good result been obtained by nerve stretching; I will not deny that the pain of tabes has been temporarily relieved in individual cases, but never permanently."

As an explanation of the improvement supposed to have followed the operation, Professor Westphal suggests that it may be looked upon as a psychological phenomenon on the part of both patient and physician.

Bardeleben gave a *résumé* of the results obtained in his experience, disclaiming responsibility for the operation, as he only operated when asked to. He had obtained no good result; it was generally without benefit to the patient.

Küster said he had operated once without benefit to the patient, and once the patient expressed himself as well satisfied.

Senator mentioned a similar experience in that there was no benefit, or the relief was only temporary. He thought the operation should be condemned or given up.

Israel mentioned two cases which had not been previously mentioned. One was rather worse after than before the operation; the other was benefited for a while, but then lost what he had gained. He fractured his patella, and was confined to bed as a consequence. He gained again nearly as much as by the nerve stretching.

He had also performed the operation in other cases of disease of the spinal cord without benefit to the patient.

Hahn had operated upon twenty-five patients nine times for neuralgia; there was almost always a return of the neuralgia in six to eighteen months; in one patient the return was delayed for two and a half years; in that case, owing to a secondary hæmorrhage, it was necessary to resect the nerve, and a piece of it was removed. In tonic and clonic spasm and epilepsy of peripheral origin he had obtained temporary benefit; in trismus, tetanus, and cases of disease of the spinal cord he had obtained no benefit.

Remak had had experience with only one case, in which Langenbuch operated, and reported[1] as materially benefited. Remak, however, considered the result negative.

The discussion before the Berlin Medical Society was continued on February 1st.[2]

Steinen reported one case of ataxia in which there was visceral neuralgia. Langenbuch stretched both sciatics. After a few days there was a temporary improvement, but it only concerned the pain; the ataxic symptoms were not benefited, and soon the pain returned as bad as before. He also mentioned another case in which Langenbuch had stretched the nerves for pain in the feet; the neuralgia returned soon after the operation; then learning that he practiced masturbation, Langenbuch stretched both nervi pudendi. The patient died.

Sonnenburg mentioned a case in which he had operated at the request of the patient, stretching one nerve. The patient was very much benefited, both legs being improved, but he understood that the patient had a return of his symptoms.

Langenbuch then corrected or explained a few of the criticisms which had been made in regard to three of the cases, but gave no summary of his results.

Moriz Benedikt[3] thinks the operation should not be too hastily condemned, that the "panic at Berlin was perhaps a legitimate reaction against the early sanguine expectation, but it went much too far." His expeence in three cases of ataxia, of which he gives brief reports, was favorable. In four cases of spinal spasm, lateral sclerosis, the spasm ceased, but the paralysis was less benefited.

Others have reported several cases of nerve stretching in locomotor ataxia with temporary benefit, especially in relief of pain and anæsthesia.

Reports of Societies.

AMERICAN DERMATOLOGICAL ASSOCIATION.

SECOND DAY'S SESSION. THURSDAY, AUGUST 31, 1881.

AT the opening of the morning session DR. WM. A. HARDAWAY, of St. Louis, reported a chronic case of skin disorder, and exhibited a life-sized portrait in colors of the patient affected with what he designated as

A PIGMENTED NEOPLASM OF THE SKIN.

When first seen, a year before, the appearances were nearly the same as at present. The patient, forty years of age, acknowledged gonorrhœa some ten years before, but denied syphilitic manifestations. The attack of gonorrhœa was followed by vegetations behind the glans penis, and about the same time (1871) he noticed enlarged glands in different parts of his body. It should also be stated that he had suffered from aural discharge from childhood; in 1868 he had passed through an attack of varioloid. When the enlarged glands appeared he took iodide of potassium, on his own responsibility, to reduce them, for several months. Subsequently papules appeared on his face, and he stopped the remedy. As they subsided they left a brown staining of the skin; afterwards pigmented spots appeared without being preceded by papules, and as they increased in size some of them coalesced, forming patches irregular in size. He then sought medical advice, and was put upon mixed treatment, and was subsequently treated at the hot springs, by mercurial inunctions, but even this vigorous anti-syphilitic course made no impression upon the spots nor upon the enlarged glands. When seen by Dr. Hardaway the skin, except in the parts affected by the pigment deposit, was perfectly healthy. The spots were very marked upon the face, especially upon the forehead and cheek, where they were irregularly oval and quite large; other spots existed on the knees and insteps, varying in size from that of a split pea up to one two inches long by one in width. The larger ones were upon the face and neck. As regards the color, it was, on the face, pinkish in the centre, but the borders were tawny or orange-hued; the small ones were entirely of this color. The larger patches had a smooth epidermic covering, not scaly, rather depressed in the centre, and they were traversed by blood-vessels which did not extend to the border; this orange-hued border was about one eighth inch in width, and was slightly elevated, and like the small spots of the same color; the surface was slightly cracked or frayed. Upon pinching up the spots the skin was found to be somewhat infiltrated, but it was not hard, the patches were freely movable. The centre of the large spots appeared to be undergoing involution, but the skin was not atrophic, there was no difference in sensibility, and perspiration appeared on the surface as on the normal skin, though possibly less freely. The spots were not painful nor tender, and only produced inconvenience from the disfigurement they occasioned. The health of the patient was good in other respects.

---

[1] Berlin. kl. Wochenschr., 1881, No. 26, p. 373, Case VI.

[2] Berlin. klin. Wochenschr., April 24, 1882.

[3] Ein Wort zur Frage der Nervendehnung bei spinalen Affektion. Wien. med. Presse, No. 13, 12, 1882.

The growth was considered to be an instance of pigment deposit, a pigmentary neoplasm of the skin. A piece of the large patch was sent to Dr. Heitzmann, who examined it microscopically, and designated it a pigmented medullary sarcoma of the skin, and gave an unfavorable prognosis accordingly.

The wound made by taking out the piece for examination was united by sutures, and healed readily by first intention.

DR. A. R. ROBINSON, of New York, reported the result of original investigations in the histology of the skin in a paper on

THE NERVES OF THE SKIN.

After referring to the medullated and non-medullated nerves, and the current views as to their course and termination, he gave the results of his personal observation, and presented a number of microscopic sections illustrating his views, which are briefly as follows: —

The non-medullated nerves form plexuses both within the skin and epidermis; in neither situation did he find the nerves ending with free extremities. The majority of the medullated fibres pass into the papillæ and form loops, the fibres returning either into the corium or into neighboring papillæ.

In describing the structure of the tactile corpuscles he declared that the striated appearance depends upon nerve fibres and upon the neurillema. This was proven by the action of a weak solution of caustic potash upon gold specimens. He reviewed the evidence in favor of the corpuscle being a structure within which the nerve fibres terminate; denying its correctness, and maintaining that the corpuscle represents only a nerve plexus, basing his view upon the following facts: —

I. Medullated nerve fibres, not connected with tactile or Pachinian corpuscles, form loops within the papillæ, and return to the corium or neighboring papillæ.

II. Non-medullated nerve fibres form loops and plexuses within the papillæ and epidermis, and probably do not terminate by free extremities.

III. In the majority of tactile corpuscles two nerves can be observed to be in connection with it; the one at the base, and the other generally at the upper part.

IV. Instead of a single medullated fibre at the upper part there are sometimes two medullated or two or more non-medullated.

V. That the nerve entering at the base can often be seen winding upward toward the apex and forming the transverse striæ which color in gold.

VI. That the nerve within the corpuscle generally retains more or less of its medullary sheath, and rarely divides in this situation.

VII. The complete absence in many corpuscles of any irregularity of contour of the fibre; hence absence of any structure resembling the end-buds of Langerhaus.

VIII. The nerve fibre in connection with the corpuscle at its upper part can be seen to be in connection with the transverse nerve striæ which appear to come from the winding upward of the afferent nerve.

Thirty-six wood engravings accompanied the paper.

DR. JAMES C. WHITE, of Boston, read a paper on the question of

THE CONTAGION OF LEPROSY.

Leprosy is a disease most common among persons not in the higher classes of society, nor distinguished either for hygiene or morals. It occurs occasionally in isolated cases where the persons have not visited infected regions, but commonly is found in individuals who have previously been brought in contact with others suffering with this disease. It may occur as late as fourteen years after such residence or exposure to infection, but usually appears much earlier. The general impression at present is that leprosy is not hereditary, although such has long been a popular belief where it prevails. The fact that syphilitic parents may have apparently healthy children, and that syphilitic subjects may live for years among their relatives without communicating the disease, is just as much an argument against the contagiousness of syphilis as it would be against the contagiousness of leprosy: he was therefore inclined to view the term sporadic with great distrust. As the duration of the period of incubation or of latency may be so prolonged, it is evident that many opportunities for infection may pass unnoticed; for instance, contact with leper patients under treatment at the hospitals who are free to come and go in the community.

As regards the frequency of the disease in this country the statistics are defective; there are an unknown number of lepers in the United States. There are foci of the disease in San Francisco, New Orleans, and some places among the Scandinavian settlers in Wisconsin, and in some of the Eastern cities cases are occasionally reported. There is a leper settlement also in Canada at Cape Breton.

After citing facts to prove the communicability of leprosy, the author claimed that measures of repression should be adopted by the only power able to do so, the government of the United States, through the National Board of Health. He recommended, in conclusion, the enforced isolation of leprous patients, the prevention of the importation of lepers from other countries, and the discouraging of marriage of lepers.

The evening session was opened by **DR. C. HEITZMANN**, of New York, who made some

REMARKS ON THE USE OF ERGOT IN SKIN DISEASES.

He said that ordinarily he was not disposed to be enthusiastic with regard to the use of remedies, or the efficiency of drugs; but he had seen such good results from the use of the fluid extract of ergot that he felt warranted in bringing it to the notice of the Association. In certain forms of acne, the large pustular form in the beard particularly, he is accustomed to use it in conjunction with Vlemingck's solution locally. Perhaps five or six per cent. may be set down as incurable, but the rest will be benefited by these remedies; of course they have a tendency to return, but they may be again treated successfully in this way. The second disease is rosacea in both of its forms, but especially in cases marked by the dilatation and new formation of vessels. In these ergot had such good effects that he extended the experiment to other diseases of the skin. He used it in psoriasis without the least result; and in a number of cases of eczema without better effect. In erythema, urticaria, and pruritus, however, the effect was most marked. He reported a case of a gentleman with chronic urticaria who was completely cured by a few half-drachm doses. Although he had used the remedy freely, and had found a few who objected to the taste and refused to take it, he had not seen a single bad effect from the remedy.

Dr. I. E. **ATKINSON**, of Baltimore, read a paper on

A CIRCINATE PAPULAR SYPHILODERM.

Although all syphilographers describe the large flat papular syphiloderm, together with many of its peculiarities, sufficient attention has but seldom been given a form of eruption that always has this syphiloderm as a starting point. This may be, with propriety, designated as the circinate papular syphiloderm. Its claim to special attention consists in its tendency to develop out of the large flat papular eruption by a depression in its centre and a peripheral extension of its limits. In the course of this centrifugal growth the depressed central portion returns to the normal limits of elevation of the skin, while the raised margin forms a narrow, sharply defined, continuous, encircling boundary, whose surface becomes the seat of a rather scanty desquamation. Occasionally, when the desquamation is very copious, the epidermis may be thrown off down to the very lowest layers of the rete mucosum, and the surface of the lesion will then be moist, lightly exuding, and shortly afterward a thin serous or brownish crust is formed, which soon dries and falls off leaving a pigmented surface that slowly returns to its natural condition. With the unelevated centre and the narrow circumscribing border the lesion may attain the size even of a half dollar, and altogether lose all resemblance to a papular eruption, more nearly resembling severe tinea circinata. The eruption is sometimes accompanied by itching. The patch, by irregular extension, slowly becomes less circular in outline, and when several coalesce curious figures are formed. This eruption belongs to the secondary period of syphilis, from about the third month to the eighteenth month; it affects both sexes, and is preferably located on the back, breast, head, neck, and extremities, though in mild cases a few circles upon the face may represent the entire eruption. A history of syphilitic infection will usually dispel doubt as to the nature of the eruption, the clinical characters of which resemble those of tinea circinata, psoriasis, erythema multiforme, and the late tertiary papulo-tubercular, and tubercular eruptions; from the latter it differs in always starting from a single lesion, while the circular patches of late syphilis represent the peculiar tendency of the disease to group its lesions in a definite manner. The absence of the characteristic microscopic appearances will separate this from tinea circinata, which it otherwise strongly resembles.

REPORT OF COMMITTEE ON STATISTICS.

DR. JAMES C. WHITE, chairman of the Committee on Statistics, presented the tabulated report for last year, containing a total of 11514 cases. He also read the consolidated statistics for the past five years, based upon 58,617 cases of skin diseases reported from the several districts situated in different parts of the United States, presenting much valuable information.

AN EXPERIENCE IN SKIN DISEASE.

DR. JAMES C. WHITE said that he had had an interesting experience in the treatment of corns and warts by a new remedy which had been brought to his notice. It is a combination of extract of cannabis Indica (about ten grains) with salicylic acid (about thirty grains) in collodion (one ounce), which, applied twice daily, causes warts to speedily disappear. In fifty cases he had not had a single failure.

A CASE OF PELLAGRA.

A communication from **DR. S. SHERWOOD** was read by Dr. Piffard, describing the case of an Italian sailor under treatment in the Long Island College Hospital. He was twenty-five years of age, had never had any skin diseases previously, nor seen any one with the same affection. A spot first appeared in January, 1882, on the forehead, and the disease subsequently spread over the face, hands, and body. No pain, itching, nor other peculiar sensations attended the eruption. Suppurating glands on each side of the neck were found on admission, and considerable febrile movement; at times the temperature had reached 105.5° F. The surface had an erythematous appearance, and there were fissures from which blood exuded. The patient's mind was despondent and dull, so that the history was necessarily imperfect.

THIRD DAY'S PROCEEDINGS.

The final session was devoted to the examination of microscopic specimens, exhibited by Drs. Heitzmann and Robinson, and new instruments.

The newly elected officers were duly installed, and the Association adjourned to meet at Lake George next year.

At this meeting Drs. Prince A. Morgan, W. T. Alexander, both of New York, and Dr. H. W. Stillwagon, of Philadelphia, were elected to active membership.

W.

Recent Literature.

The Forty-Third Annual Report of the Superintendent of the Boston Lunatic Hospital, for the Year ending April 30, 1882.

Dr. Theodore W. Fisher, the enterprising superintendent of this time-honored institution for the care of the insane, presents us with an extremely interesting report. While we miss some of those pleasant religious platitudes, which, our English critics tell us, are apt to be copiously scattered through our American insane asylum reports, we find much sound common sense, and some well recorded autopsies by Dr. W. W. Gannett, the pathologist.

After referring to the appropriation which the City Council has made for improvements in the ventilation and heating, and the additions of small wings to serve as dining rooms, Dr. Fisher alludes to the Bethlehem Hospital in London, England, the original "Bedlam," founded in 1547, which was formerly the scene of much cruel treatment of the insane, but is now modernized and furnished with every convenience, and then proceeds to say: "Our own hospital has a briefer history, but one of some interest as showing great progress in the humane treatment of the insane. It is sometimes forgotten that the primary duty of caring for the insane belongs to the cities and towns and not to the State. This was shown in 1837 when the excess of patients in the Worcester Hospital was returned by the State to the counties from whence they came, thus filling the Suffolk County House of Correction and the Boston Almshouse with unwelcome inmates. In their new quarters, these patients were confined in cells, or in wooden cages on wheels for convenience in giving them an airing. Alderman, afterwards Mayor, Eliot was chairman of the committee which reported in favor of a hospital, and in 1839 this building was completed and the insane removed to it." In 1846 the building was enlarged, and a separate building was erected, containing a block of twenty cells constructed of brick, with stone floors and no windows, resembling the cells of a police station. These cells were well warmed and ventilated, and similar to those in other hospitals, but they were unnecessarily strong and forbidding, and were destroyed a few years after by Dr. Walker, who was the first superintendent in the State to abandon the use of cells in the treatment of the insane. In 1853 the hospital was filled to its utmost capacity, but from that time to this, no essential changes have been made in its internal arrangements. The same lack of an adequate classification has existed for over a quarter of a century, and the noisy, violent, and filthy patients are still treated in the lower wards of the main building, to the disadvantage of the quieter patients. While the appropriation referred to will give better administrative facilities, the same lack of classification must still continue.

The daily average number of patients was 177, and 115 were admitted. Of these, thirty-five were emergency cases, and three voluntary patients. The hospital has done a most excellent work in admitting these emergency cases, and many physicians have occasion to thank Dr. Fisher for the good judgment he has shown in receiving them. The recoveries, throwing out emergency cases, were about thirty-two per cent. Two cases relapsed. The percentage of deaths was thirteen, many patients being admitted only to die. Of the twenty-three deaths, eight were from general paralysis, seven were aged persons, and four were chronic cases.

Instead of there being only 153 chronic and quiet patients as at the date of the last report, there are now 189, the difference being made up of recent and excitable cases. The 101 female patients have to be classified in three wards, and it is almost an impossibility to properly separate the quiet, sick, and timid from the noisy, violent, and filthy. There being no detached building for the excited patients, "a single bad case may disturb the whole wing, keeping patients awake whose recovery depends on their ability to sleep. That some do recover under these conditions is proof of the curative powers of nature, and the value of enforced seclusion from still more disturbing influences outside the hospital." Listen to these words, we beg you, City Fathers, and when you read the neatly printed report, which Dr. Fisher has doubtless sent you, ponder seriously over it, and remember how extremely probable it is, that you, or your wives, or your children, or at least your grandchildren may be the victims of insanity, and, in consequence of a foolish, short-sighted economy, exposed to the unhappy influences to which we direct your attention. While you are still sane, City Fathers, be courageous, and zealously advocate at your council fires the erection of at least one or two detached wards for the violent patients on the hospital grounds.

On the male side of the hospital the number is not so large, but outbreaks of violence are not uncommon, and it is rather surprising to see how well attendants preserve self control under such trying circumstances.

For some weeks before the date of the report, no restraint had been used, seclusion being substituted. Nasal feeding is the only method of forcible feeding in use. The food employed is a pint of equal parts of beef tea, gruel, and cream, to which may be added tonics and stimulants as required.

The usual difficulty in keeping good attendants has been experienced, and the average residence of those in direct attendance on the insane during the last year was only four months! The patients are all in the actual charge of thirteen attendants.

Visiting of patients, contrary to the old rule, has been almost unrestricted, friends dropping in at all sorts and kinds of times. On the whole, *good*, instead of *harm*, seems to result, but it takes much extra time of the attendants, and a larger number will be required to continue it. Unrestricted visiting is being tried at some other hospitals near Boston, we are told, and we shall be much interested to see if it works better than the old plan of *no admittance.*

Dr. Fisher very wisely says that "the change in the number and character of our hospital population should be met by a corresponding change in management." Persons afflicted with perhaps the most terrible of diseases, and placed under a treatment beyond their control, should have every amelioration possible.

Out of the twenty-three deaths there have been fourteen autopsies, which is an unusually good showing. "The importance of complete and thorough post-mortem examinations is especially great in cases of insanity. The impossibility of getting reliable information from the patient, in aid of diagnosis, renders this the only method in some instances of assigning the true cause of death. . . . It also teaches caution in various ways. For example, the discovery of inhalation pneumonia in general paralysis, suggests the importance of great care in feeding all patients who may be in a semi-conscious condition."

In the appendix we find the post-mortem appearance in six cases of general paralysis described. Want of space prevents giving an account of the remaining eight cases. In five of the six cases of general paralysis marked interstitial changes in the first layer of the cortex were found. In the sixth case, which was the only female case, no such changes were observed. Neither were these changes found in the eight cases not here recorded. In four of the six cases ependymitis of the ventricles existed. In the remaining eight cases it was found only in a case of epilepsy. Atrophy of the brain existed in five of the six cases. In the remaining eight cases in five. Chronic internal pachymeningitis was found in two of the six cases, and in one case only of the eight. Chronic leptomeningitis existed in three of the six cases, and in two of the remaining eight. No attempt is made to draw any conclusions from these few cases. W. C.

Medical and Surgical Reports of the Boston City Hospital. Third series.

PATHOLOGICAL HISTOLOGY OF THE SPINAL CORD.

BY S. G. WEBBER, M. D.

Our previous notice of the City Hospital Reports[1] would not be complete without a reference to the careful article by Dr. S. G. Webber on the Pathological Histology of the Spinal Cord. Although made up for the most part of statements of the views of other authors upon the different points discussed, these statements have evidently been carefully verified, and the paper bears therefore throughout the stamp of originality, and forms one of the most convenient and reliable expressions of the best pathological opinion on this subject that is anywhere to be found. It possesses, in fact, so nearly the requirements of a practical manual that it would repay enlargement and amplification from that point of view. It would also have been especially interesting to learn the author's experience concerning the pseudo-pathological changes produced in the cord by post-mortem processes and under the various methods of hardening, since these are rocks not always laid down in the charts of even pretty experienced discoverers, and a cause of very frequent mishaps to tyros.

We miss also some statement as to how far the pathological changes described are compatible with apparent health.

The tone of confidence and authority which pervades the paper gives proof of long and conscientious labor on the writer's part.

The pathological division of the different forms of myelitis into acute and chronic, parenchymatous and interstitial, is no doubt the best that pure histology can now furnish, but it sounds a little barren when we think of the varied ætiology of diseases of the spinal cord, such as exposure, fright, over-exertion, the many poisons, the obstruction of lymph or blood-vessels. We are certainly destined to learn something more from topographical anatomy guided by embryology and physiology. The latest advance in this direction is that made by Dr. Ross, of Manchester, England, in pointing out the probable difference in pathological relationship between the tissues of earlier and those of later development or differentiation.

If these opinions are verified, a new incentive will be given to the study of the histology of special localities.

The value of Dr. Webber's paper is increased by a number of good plates, made from preparations of his own. J. J. P.

OPTICO-CILIARY NEUROTOMY. FIFTEEN CASES BY OLIVER F. WADSWORTH, M. D.

The question whether optico-ciliary neurotomy shall be established as an ordinary substitute for enucleation, or whether it shall be placed in the category of unusual and extraordinary operations, is a pressing one among ophthalmologists of the present day. Dr. Wadsworth's paper in the City Hospital Reports contains an account of fifteen cases of this operation, and a candid review of them as far as their bearing upon the question of the substitution of neurotomy for enucleation is concerned. The clinical deductions contained in the review are of great practical value, and impress one as the work of a cultured and honest observer. The anatomical facts, stated as bearing upon the question of the danger of reunion of ciliary nerves, are given in a manner that contrasts quite strongly with the painstaking thoroughness with which the clinical questions involved are handled. After noticing Friedrich Arnold's description of the ciliary nerves, it is stated that "later writers on the anatomy of the ciliary nerves in man, however, so far as I am aware, with a single exception, describe these nerves as all entering the sclera around the optic nerve, and not very far distant from it." Redard is mentioned as the "single exception." Now the fact is that Henle's classical description of the ciliary nerves is almost a literal restatement of Arnold's observations, and we think Henle's views are the same upon this point as those of most leading anatomists. The conclusions of Mooren,[2] that "the extraordinary number of means of communication favoring the development of sympathetic troubles explains that only the perfect separation of these means of communication by enucleation furnishes the possibility of bringing the destructive process to a stop, provided, of course, that the operation is undertaken in proper season; all other methods, such as section of the ciliary nerves, the neurotomy of the optic and ciliary nerves, cannot furnish the same guarantee of the result without regard to the fact that the formation of the cicatrix following the section may of itself favor the conveyance of sympathetic trouble," seems to us more in accord with our present knowledge of anatomy and pathology. Instead, then, of regarding optico-ciliary neurotomy with Dr. Wadsworth, as "advisable in many cases," we should favor its restriction to the small series in which a fair cosmetic result may reward the patient for the extra dangers and the loss of time incident to the operation. D. H.

— The works of Galen, supposed to have been lost, are said to have been discovered in Salonica, by M. Papageorges. They are in manuscript, and originally formed two hundred and forty-eight sheets, of which one hundred and forty-four are in good condition, twenty-four are mutilated, and eighty are missing.

---

[1] Vide JOURNAL for July 18th and 25th.

[2] Fünf Lustren Ophthalmologischen Wirksamkeit Wiesbaden, 1882.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 14, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

SIPHONAGE AND VENTILATION OF TRAPS.

The *Sanitary Engineer* of August 31st contains a report to the National Board of Health on the Siphonage and Ventilation of Traps, by Edward S. Philbrick and Ernest W. Bowditch, two experts of the highest reputation. In making the experiments, two soil pipes, one four-inch and one two-inch, fifty-seven feet and a half high, were placed in a vertical position, with traps, etc., representing three stories and basement, in the building of the Massachusetts Charitable Mechanics' Association, by the courtesy of the managers. Both pipes were of full size to the top, and freely open, as it is now generally admitted that such free ventilation is quite necessary, whatever the other arrangements.

With the two-inch pipe, it was found that an unventilated hopper closet siphons out with even less than a quart of water thrown in with a dash, and that most of the admissible patent traps for wash-bowls have their water seal destroyed, if unventilated, by pouring any considerable amount of water into the soil pipe on any floor above them. All of these objections were removed, however, by free ventilation for each trap. Still, the possibilities of abnormal air pressure increase as the size of the soil pipe diminishes from four or five inches for an ordinary house; and the smaller pipe is open to objections which do not apply to the larger.

With the four-inch soil pipe, about three quarts of water thrown into a conical hopper, with a one and seven eighths inch seal, unventilated, produced siphonage; an interesting fact brought out by the experiments being that under apparently the same conditions the water seal was destroyed only a few times in comparison with the frequency of the traps being preserved. With water-closet and hopper, or hopper and bath, both discharging, a four-inch trap on a lower floor was lowered from two and one sixteenth to two and three sixteenths inches, destroying the seal. With bath, hopper, and water-closet emptied together, the trap water was lowered two and five sixteenths inches. The common S-trap of one and one half inches calibre and one and one half inches depth of seal, the Bowers trap and the Cudell trap (D-trap with two balls) were tried under conditions in which they are ordinarily placed for wash-bowls, and had their water seals destroyed from four to nine times in ten experiments when the water-closet was discharged and bath waste was flowing on the story above. The round trap, with inlet at the bottom and outlet at the top with two and one half inches seal, could not be unsealed by the greatest possible amount of water discharged at one time from hopper, bath, and water-closet discharging together, although a few bubbles of air passed downwards through it. In speaking of mechanical valves, cups, balls, and flaps for supplementing the water seal the experimenters state that they have never seen one of these devices which could be relied upon to shut out air after the apparatus had been used and defiled for a few months by a flow of ordinary house drainage, whether from laundry, kitchen, or lavatory.

The conclusions, somewhat condensed, drawn from the experiments are as follows: —

(1.) When hopper water-closets are used for the emptying of slops, and when the trap is placed below the floor, it is difficult to preserve the seal in the ordinary form of S-trap, even by a vent pipe attached thereto, unless this be applied directly at the crown of the trap, and be as large as four inches in diameter for at least a foot above the trap. An increase of the depth of the seal and a decided, quick upward turn at the bottom of the trap will both operate to preserve the seal. But there are limits to the advisable depth of water seal, arising from the tendency of deep traps to retain their filth. Moreover, all angles and very abrupt changes approaching the form of an angle should be avoided, for the same reason. The proper medium is only to be attained by the use of good judgment in any case.

(2.) When a short hopper is used for emptying slops, with a trap above the floor, though the momentum of the falling water is considerably reduced by the diminished distance through which the water falls from the pail to the trap, there is still no security for keeping the water in such a trap, unless supplied by a special air vent. This should be at least one and one half inches in diameter if more than a few feet in length, and even larger if passing to other floors above.

(3.) Other forms of traps, which might save and retain their water by means of a lateral expansion of their basins, are objectionable, owing to the amount of filth which they retain, subject to decomposition. The *ordinary S-trap alone, with ample air vent,* is therefore recommended for use under water-closets, and *also for all other fixtures* where its proper ventilation can be secured within reasonable limits of expense. The proper size and length of such vent pipes must be largely a matter of judgment. Their combinations admit of such a great diversity of conditions that we can only urge that every one should be severely tested by repeated trials, applying larger vents, or making the small sizes shorter whenever any doubt arises as to their efficiency.

(4.) The above precautions are of more importance, and should be observed with greater care when waste pipes are used of smaller size than four inches to carry the flow for more than one or two feet in distance.

(5.) Whenever branch inlets are connected to a line of waste or soil pipe that is vertical or approaching that direction, above which branches other fixtures are used for discharging water into the same main, there is great risk of losing the water from the traps attached to such branches whenever the upper fixtures are used. No form of trap without special air vent has come to our notice which is not likely to lose its water seal under such circumstances, even when the top of the soil or waste pipe is open, except those which, like the round trap above referred to, are objectionable for retaining filth. This objection is intended to be met by providing a large capped opening at the top for the removal of the filth. In practice this is seldom done, and if done without the help of a mechanic, the cover would rarely be closed tightly, as now constructed, so that the frequent cleaning of such traps is very difficult to accomplish and an annoyance when done. The risk involved by the use of such small cess-pools in the house would be small if perfect tightness could always be insured at the joint of the cover. Air vents are sometimes applied to them, but are of doubtful utility. The round trap may often be properly used, however, in old houses, in places where the introduction of a vent might be very inconvenient or costly.

(6.) The best and most simple remedy for the siphoning of traps, in most cases, is undoubtedly to be found in the introduction of air at the normal pressure at the crown of the trap. No definite rules can be given for the size or length of vent pipes. Yet it may be said that it is not safe to trust to a vent pipe of less size than that of the trap it is to serve until we get above two inches diameter, except they be of only a few feet in length, before they join those of a larger size.

(7.) There is still another risk arising from an excess of air-pressure in house drains having an exterior main trap, or discharging into a cess-pool at a point below the water line by a dipping inlet pipe, as is often done for the sake of checking the back flow of gas from the cess-pool unless there is a free vent in the drain between the trap and the house, so as to prevent the compressed air in the soil pipe forcing the traps on lower stories when there is a rush of water from a point higher up.

(8.) Though condemned by most English authorities, it is doubtless a safer way to connect the waste pipes of baths, bowls, etc., used on upper floors directly to the large soil pipe by Y-branches as near as practicable to the fixtures drained than to erect long lines of smaller-sized wastes separately for such purposes. Certainly the larger the pipe the less is the risk of any abnormal air pressure occurring by its use so long as the wastes are not likely to become encumbered seriously by accretion of solid matter. The provision of separate wastes for baths, etc., all the way to the basement is considered important in England, probably because of a dislike to make inlets in the soil pipe used for water-closets. But the risks arising from the use of a small-sized waste through such distances are thus proved to be considerable, and should not be ignored; while those arising from the common use of a four or five-inch pipe for water-closet and general refuse water on several floors may have been overrated in England.

These conclusions are certainly carefully made, and we most heartily approve them, except that we think that the advantages by the English method of separate waste pipes for wash bowls have been underestimated.

No pan closets were used in the experiments, as it was assumed that they have already been proved to be objectionable on other grounds than those of ventilation and siphonage.

A MUSEUM OF HYGIENE AT WASHINGTON.

THE Navy Department has issued a circular from the Bureau of Medicine and Surgery, calling attention to the Museum of Hygiene, which has been organized under that Bureau and officially recognized by Congress in an act appropriating $7500 for its expenses during the current fiscal year. Surgeon-General Wales states that the necessity of a central institution of this sort has long been felt, and it is hoped that the present organization will supply this need. The plan, briefly described, comprehends a collection that shall be illustrative of the entire range of sanitary science, the establishment of a course of lectures by authoritative sanitarians from all sections of the country, and a library of sanitary science accessible, under proper restrictions and guarantees, to all who are engaged in the study of this branch of knowledge. This library already numbers many of the standard sanitary works in the English, French, and German languages, and is constantly increasing.

It is intended that the museum shall exhibit the present state and future progress of the nation in all departments of hygiene. The active interest and coöperation of the Medical Corps of the Navy, whether at home or abroad, are expected in this undertaking, and physicians, engineers, architects, builders, manufacturers, inventors, and others interested in sanitary matters, throughout the country, have been appealed to for their coöperation. Models, apparatus, plans, and diagrams illustrating naval and general sanitary subjects have been gradually accumulating, and these have been placed on permanent deposit at the museum.

At a meeting of the American Public Health Association a resolution was adopted making this museum the central depository of its collections.

It is proposed to divide the subjects the museum will deal with into three departments, (A) Department of Public Health and Comfort, (B) Department of Life Saving and Preserving, (C) Department of Literature and Drawings. These departments are to be subdivided respectively into twenty-five and fourteen and two classes, as follows: —

A.

Class 1. Soil and atmospheric air.
2. Streets, roads, public places.
3. Removal of sewage, excrements, and garbage.
4. Providing towns with water.

5. Public lighting.
6. Providing cities with food.
7. Public laundries.
8. Public baths.
9. Public instruction.
10. The dwelling.
11. Buildings which are permanently occupied by many people.
12. Rooms which are temporarily occupied by many people.
13. Hotels, restaurants, coffee houses, etc.
14. Factories, laboratories (chemical, powder, fireworks), metallurgic works, including dwellings for the workmen.
15. Agricultural works.
16. Heating and ventilating.
17. Food products.
18. Steam, horse, and electric railroads.
19. Water transportation.
20. Clothing and treatment of the skin.
21. Preventing contagious diseases.
22. Hospitals, medical establishments, and infirmaries.
23. Burial of the dead, vaults, and morgues.
24. Veterinary department.
25. Fragments of exploded boilers, heaters, tubes, etc., damaged by pressure, frost, acids, scales, and other deposits.

B.

Class 26. Life-saving from fire.
27. Protection against lightning.
28. Protection against inundations.
29. Protection against explosions.
30. Safety appliances in traveling on land.
31. Safety appliances in traveling on water.
32. Protection against accidents in submarine works.
33. Protection against accidents in mines.
34. Protection against accidents from machinery.
35. Attendance to persons accidentally injured in peaceful pursuits.
36. Attendance to persons wounded in war.
37. Ambulances, hospitals, barracks, and hospital ships.
38. Apparatus for taking care of the wounded in war.
39. Marine architecture.

C.

Class 40. Miscellaneous.
41. Literature and drawings appertaining to these departments.

◆

A NATIONAL MEDICAL AND SANITARY EXHIBITION.

SIMULTANEOUSLY with the above the attention of our readers is called to a proposed conference of commissioners to assemble at Indianapolis on October 18th next, to take into consideration the question as to the best course to be pursued to promote a National Medical and Sanitary Exhibition in 1883. State Boards of Health are requested to appoint commissioners to meet those appointed by the National Board and the American Public Health Association. The movement is supported by very good names throughout the country.

◆

PROFESSOR ESMARCH ON PRESIDENT GARFIELD'S CASE.

IN publishing the remarks of Professor Esmarch on the case of President Garfield it did not seem necessary to add that the publication did not necessarily carry with it either the approval or the disapproval of either editor or translator.

Interesting as is everything that comes from the pen of the celebrated professor of Kiel, neither his skill as an operator nor his distance from the case criticised gives to his judgment the attribute of infallibility. His is simply the opinion of a celebrated surgeon as to what ought to have been left undone, and a guess as to what might have been had a certain hypothesis been true.

If anything was done which ought to have been left undone, the surgeons of the case still deserve credit that they remained so steady under that popular clamor to do something which, years before, under the form of On to Richmond, forced and lost a battle, and imperiled the existence of the Union.

◆

MEDICAL NOTES.

— After all, the homœopathic exchanges are not such dull reading — on a dull day. A female professor in the Boston University School of Medicine is studying at Vienna, where she sees much that is interesting. She writes to the *New England Medical Gazette* that in the maternity wards "a large proportion of the cases are *primipara*," giving an uncomfortable impression that each *primiparum* must be more or less of a hermaphrodite. It is mournful to reflect that even our homœopathic brethren are not to be exempt from the prevalent iodoform mania. The writer adds her contribution to its therapeutic uses as follows: "Just now iodoform is quite the rage here, every kind of wound being treated with it, and effects are obtained from it that we should call a proving. One patient became quite delirious, and the attending physician omitted the use of the iodoform, and the delirium disappeared. One of the noted physiologists here has been experimenting on animals with this remedy, and the other day I made preparations from the spinal cord of a dog that had been heavily dosed. The sections (under the microscope) showed great congestion of the cord, the blood-vessels showing very distinctly and quite large. I do not know whether iodoform is used by homœopathic physicians as a remedy, but it occurred to me when I saw the cord in this condition that it might prove beneficial in congestion of the spinal cord in the human race." It is to be feared that some of the instructors (assuming that they are correctly quoted) are a little disposed to chaff the professor. "In answer to my question, What is the cause of so much of this paralysis in patients so young? Dr. S. W. replied, 'Struggle for life and syphilis.'" We find it difficult to believe that in a city of the social characteristics of Vienna the struggle for syphilis need be so arduous as to paralyze its devotees. Perhaps, however, the rivalry of these depraved young persons is simply that they may be in the fashion. That many do get it without a struggle the writer evidently believes, for she says: "So generally is syphilis recognized, that the first act on the part of the midwife is to syringe the eyes of the child with a solution of *nitrate of silver*." It is to be regretted that the professor did not say how it was explained that this operation protected the child from syphilis, and why it might not occasionally be used with certain other local ailments of the mother.

— Von Langenbeck's last clinic at the University Hospital of Berlin was, according to the reports of correspondents, an occasion of much picturesque interest, closing as it did forty-two years of clinical professorship, thirty-four of which had been spent in Berlin. On this occasion the operating table and the cases of instruments had been removed from the amphitheatre and their place filled with flowers, laurel, and palms. A bust stood at either side, one of Karl Friedrich von Graefe, the first director of the surgical clinic and father of the celebrated oculist. The other was of the retiring professor, and was crowned with ivy. The seats were crowded with students, professors, and the officers and most conspicuous members of the Berlin Medical Society. When the distinguished surgeon appeared with his assistants, it was in his long linen operating coat, which, as he said, seemed to him more appropriate to the occasion than festive attire. The speeches were brief, and seem to have been in excellent taste. Then three of his recent cases of hip-joint amputation were rolled in, and while the dressings were being removed he took occasion to say a few words on his method of performing that operation. The favorable results in these three cases were then shown, and with a few words of farewell his shortest and his last clinic ended.

Langenbeck is now sixty-three years old, and is beginning to feel the infirmities of age. His chirography is nearly illegible on account of the tremor of his hands, but it is said that in operating these are under perfect control.

— An article by Dr. Lewis S. Pilcher, in the *Annals of Anatomy and Surgery* for September, on Tracheotomy and its Complications, emphasizes one point which is not often spoken of, namely, the turning in of the cartilages of the trachea at their posterior part, thus forming in a number of contiguous rings an elevation running up and down the back of the trachea. This is, of course, due to the spreading apart of the cut surfaces of the rings in front by the canula. To avoid it he recommends the excision of a portion of the rings by means of a horse-shoe shaped punch, introduced at the first incision. The cartilages then not being spread, no arching forward takes place at their posterior portion. The practical bearings of the protrusion as it occurs after the ordinary operation are first, of course, the obstruction thus caused to the ingress of air, and, secondly, the unfortunate results of mistaking it for a granulation and trying to remove it.

— It is worth while to observe a little caution when you send a patient to the care of a medical friend at a distance as to whether she (it is usually a woman) is to be trusted fully as the bearer of a letter describing her own case. A French journal reports that a lady being sent under such circumstances to some baths was seized with curiosity to know what her medical attendant had said about the obscure disease from which she suffered. The diagnosis and recommendation for treatment which she found was this; "Mon cher frère. Je vous envoie une oie à plumer. Plumez la sans trop la faire crier."

— A murder is reported in the daily papers of an inmate in the hospital for the insane at Augusta, Me. The assailant was another patient of the hospital, named Smart, who had been previously harmless, and had been allowed to assist in caring for the others. On the day of the murder he was helping the regular keeper of his victim, and after the latter's breakfast had been prepared Smart took it down. A few minutes later a noise was heard from the patient's room, and on entering it the keeper found that Smart had tied a towel around his victim's neck, and by means of a piece of gas-pipe had twisted the towel till fatal asphyxia resulted. It is said that no symptoms of violent tendencies had ever been observed in Smart, so that the officers of the hospital are not considered responsible for the unfortunate event, although the presence of the piece of gas-pipe is not explained.

— According to Dr. Squibb, "St. Jacob's Oil" is a badly made aconite liniment. It consists mainly of water, ether, alcohol, turpentines, and a small proportion of aconite, with red coloring matter. His saintship may not be very strong on therapeutics, but he inherits enough of the financial "grasp" of his great ancestor and namesake to have worked up a business, it is claimed, of two million dollars a year. While thus St. Jacob is "on Fortune's cap the very button," Mrs. Lydia Pinkham seems to be about "the soles of her shoe," having recently gone into bankruptcy. Undoubtedly that smiling gynæcologist would be well satisfied with a position about Fortune's waist or in the middle of her favors. But it would seem that the goddess, in spite of Hamlet's unfavorable estimate of her character, has at least no "female weakness." Mrs. Pinkham's relatives, however, are reported, we know not how truly, to be well cared for. Her smile continues to greet the public astringently.

— At a recent meeting of the Liverpool Health Committee the inspector of nuisances reported that a laborer working on board the steamship Wisconsin, from America, had found a living Colorado beetle. The deputy town clerk said he had telegraphed the fact to the Lords of the Privy Council, who directed that the insect should be killed, and forwarded in a box to Whitehall for inspection [! !]. — *Local Government Chronicle.*

— A woman named Ellen Sherry hung herself at Bootle, near Liverpool, and her body was placed in the mortuary. The coroner gave a certificate to the deceased's husband, who placed it in his pocket and took it to sea with him. In consequence of complaints the nuisance inspector visited the mortuary, where he found it necessary to throw a gallon of carbolic acid about. The workhouse governor was applied to, but said that the body could not be interred until the husband was found, and the coroner's warrant obtained. Finally, after much delay, the nuisance inspector applied to the borough magistrates for an order for the immediate removal of the body, which had become a nuisance. The Bench felt in a difficulty in regard to the matter, as there was no by-law to meet the case. After a long consultation the magistrates decided that the nuisance must be abated, and the order asked for was granted. — *Local Government Chronicle.*

Miscellany.

COMMUNICATIONS ON DR. KEITH AND LISTERISM. A CORRECTION.

To the Editor of the Boston Medical and Surgical Journal: —

Sir, — My attention has only just been drawn to a letter from Dr. G. H. Lyman, in your issue of April 27th, entitled, Dr. Keith and Listerism. As I have good reason to believe that I am the "English ovariotomist" who is therein so courteously alluded to as the author of "untrue statements" with regard to Dr. Keith, I shall be glad if you will allow me an opportunity of stating what it was that I really said to the correspondent who unconsciously misrepresented my remarks to him in your Journal of January 12th.

In October last, while talking over the events of the recent International Medical Congress, some allusion was made by this gentleman to the subject of Dr. Keith's remarks during the discussion on Abdominal Surgery in the Surgical Section, and considerable surprise was expressed that the conclusions arrived at by Dr. Keith respecting the value of antiseptics in peritoneal operations should have been so utterly at variance with the views held on the subject by Mr. Spencer Wells and other leading ovariotomists in London. I mentioned in reply a report which was then current here, and which had just reached me on trustworthy authority, to the effect that Dr. Keith had latterly (that is, since he began to operate in the Edinburgh New Royal Infirmary) taken to increasing the strength of the carbolic lotions employed for the instruments and sponges during his abdominal sections, using a *five per cent.* solution in place of the weaker lotions which he had previously been in the habit of employing. I added that this might possibly, I thought, help to explain the fatal results referred to by him at the Congress. No allusion whatever was made by me to any alleged increase in the strength of the spray employed by Dr. Keith. Such increase as that mentioned by your correspondent of January 12th would be an impossibility, since the ordinary *five per cent.* spray lotion is itself a *saturated* aqueous solution of the acid, and hence does not admit of any further concentration.

I may here state that these remarks were made in the course of ordinary conversation, without my having the remotest idea of their being used for publication; and I much regret that the gentleman to whom I was speaking should not have subsequently thought it worth while to refer to me, with a view to insure the authenticity as well as the accuracy of any statements which he intended to publish.

While writing this, my attention has been called to a communication from Professor Yandell in the *American Practitioner* of November, 1881 (vol. xxiv., No. 143), which, as a verbatim *résumé* of statements made to that gentleman by Dr. Keith himself with regard to his reasons for abandoning the use of rigid Listerism in his abdominal practice, entirely confirms the correctness of the report mentioned by me to your correspondent of January 12th.

I am, sir, your obedient servant,
Wm. Appleton Meredith.

6 Queen Anne St., Cavendish Square,
London, *May* 26, 1882.

Mr. Editor, — The foregoing letter, sent me by its author for publication in the Journal, relieves me of the further necessity of silence as to the source of information which I sincerely thought was clearly comprehended by me, and which I communicated to the Journal of January 12th last.

I must respectfully differ from your correspondent in his assertion that he "had not the remotest idea" that I intended to use for publication "remarks made during an ordinary conversation." The conversation cannot be considered ordinary. After remarking that I contributed to several medical journals, and adding that I should be glad of material, I asked: "What points can you give me relative to the Congress which are not generally known? For example, What about the Keith-Lister discussion?" The reply was: "Keith has abandoned the spray in abdominal surgery, but there were two points which he did not mention at the Congress." One of these was the effect of the spray upon Mr. Keith's health. The other was: "He did not mention that he had increased the strength of his lotions ten per cent., and this must have had an important influence in the fatal cases." Your correspondent errs in thinking that anything whatever was said in reference either to *on dits*, common report, or rumor. The remarks were made simply as I have given them. Aside from my memory, which is very clear on this point, my own certainty is based upon the fact that I wrote them down in my note-book in the form in which they were made within ten minutes after hearing them.

I have, however, to acknowledge that I *was* misled by your correspondent's use of the term "lotions," in which, on several occasions during our conversation, as well as in private notes to me, he included the *spray* as well as the carbolic washes for instruments, sponges, etc. This was my misfortune. I regret it, and am sorry I did not more clearly comprehend your correspondent. It led me into the error, in my communication to you of January 12th last, of making it appear, where I referred to the reported increase of the "carbolic solution" (the term I used), that I specified the spray alone. It was only upon hearing from the gentleman that I discovered that although he intended to refer merely to the washes, he so used the word "lotions" as to lead me to suppose that he included the spray; and in the very communication which I now hand you, it will be observed that he uses the expression "spray lotion." We do not thus refer to the spray and the washes, and hence my misinterpretation. As to the amount of the increased strength of the solutions, I copied my figures directly from my note-book. Those I gave you undoubtedly were an unintentional misstatement of your correspondent at the time of our conversation.

I now wish to say without modification that I regret exceedingly the annoyance I must have caused Mr. Keith. Moreover, that before addressing the Journal upon the subject I ought to have referred the matter to Mr. Keith for verification. Application of the same term by your correspondent to the washes and spray alike, misled me. Nevertheless, if I had clearly understood that the point at issue was the increased strength of the washes alone, I still should have felt it a matter of interest on behalf of Listerism to have brought up the subject for discussion. But before doing so it would have been wiser to have consulted Mr. Keith. Yet, in spite of any complexion which my note of January 12th may assume, I had not the slightest desire to injure him. My sole object was the endeavor to make capital, not for Lister, but for Listerism and the spray. This, in view of the error into which I unconsciously was led, being now out of my power, I have only to add my renewed regrets that I have annoyed Mr. Keith, and also that the matter has given you considerable trouble. I need not say that when my communication in the JOURNAL of January 12th was written, access to the Transactions of the Congress was impossible. Very truly yours,

HAMILTON OSGOOD.

THE AMERICAN SOCIAL SCIENCE ASSOCIATION.

THE annual meeting of this Association occurred last week at Saratoga, beginning Tuesday and lasting four days. The prominent features of the successive days respectively, were, Education, Public Health, Politico-economic Science, and the Labor Question. We mention some of the leading papers.

The opening address on the 5th, by Professor W. L. Harris, on Education, was, to some extent, a continuation of his remarks offered on a similar occasion last year. Miss Alice Hitcher, of Washington, followed with an article on Civilization of the American Indian. Mr. H. L. Wayland's views on Progressive Spelling called forth an earnest discussion from the conservatives and radicals on this vexed question. At the evening session, Rev. A. D. Mayo spoke on the subject of National Aid to Education, and the Association adopted a memorial advocating governmental assistance to those portions of the country less advanced in this regard. Mr. Goldwin Smith followed with some remarks on the same subject suggested by his study of the educational question in England and France.

On the second day papers on Boards of Health were presented by Dr. Walter Channing, of Boston, and Dr. Baker, Secretary of the Michigan State Board. The former emphasized the importance of preventive medicine, especially with reference to the diseases of modern civilization so far as they are caused by overworking of the nervous system. Dr. Baker's papers advocated the desirability of additional functions being assigned to the National Board of Health, particularly in the direction of collecting statistics furnished by local boards, so that the central body shall present synoptical results founded upon the information furnished from different parts of the country — a method somewhat analogous to the work of the National Signal Service.

Dr. A. N. Blodgett's article on the management of Chronic Inebriates and Insane Drunkards produced some discussion which brought out the radical differences between those who regard drunkenness as a disease and those who consider it a crime.

Sanitary precautions were treated of with reference to the household, by Dr. Hunt, of the New Jersey State Board of Health.

Dr. D. F. Lincoln's paper on the Health of Boys' Boarding-schools was not read, and as it may have a special interest to our readers, we give some extracts.

"As regards the size of rooms, much depends on circumstances. For dormitories the requirement should be large; not so large as in barracks, but liberal. In a noteworthy series of articles published by the London *Lancet* in 1881, an estimate is given, which may be accepted as a minimum standard, viz.: Six hundred and fifty *cubic feet of space* per head for boys unde twelve years of age, and eight hundred and thirty for boys from twelve to sixteen. It would be well to restrict such rooms to one use; not to let them be used for studies; to have the windows open all day, and keep the boys out until bed-time.

"This class of rooms is occupied continuously for ten hours every night; but with other rooms the case is different. It is to be supposed that a school room is not occupied continuously for longer than two or three hours without a thorough airing by windows, in addition to constant flue ventilation. One third of the space mentioned above is found to be practically sufficient for such rooms. Recitation rooms are very often slighted in respect to space. Where the school is planned with one large common room for assembly, it is often the case that the recitation rooms are twice as crowded as the large one; paltry, stuffy, dark, draughty little corners and holes of rooms. Music rooms, and other special apartments, are apt to be too small for free circulation. . . .

"In any case, rooms facing due north must be rejected for the purposes of sleeping; they are only desirable where a peculiar light is wanted, as for drawing. . . .

"A room ought to be reserved for hospital uses. It should be remote, dry, airy, and sunny; should receive no unpleasant odors, coming up through its floor, from unventilated cellars, or through its plaster walls, from adjoining store closets. The floor should be of wood. Abundant means of ventilation should be provided, including a well drawing chimney. But such a room ought to be seldom used. If frequently resorted to for severe colds, headaches, or other troubles, there is reason to suspect something wrong in the arrangements of the school itself. . . .

"A system of discipline where bodily restraint has to be employed frequently, constitutes an infringement upon the laws of health. It would be better to return to the old-fashioned code, and adopt the practice of one English master, who replied to the inquiries made by the London *Lancet* in terms as follows: —

"'We have compulsory gymnastics half an hour. Every boy must be out at least forty minutes before dinner, engaged in some out-door exercise. Every boy may be out rather more than one hour before dinner. Different forms are out at different times, but all have two intervals, one about ten minutes, the other nearly an hour. Gymnastics, etc., are taken at other times. Golf is greatly played, but boys are almost made to play hand fives occasionally, as being one of the few exercises which develops the left side of the body. At 3 P. M. every boy is obliged to dress in flannel, which, except in summer, must be changed before tea. He must be out of doors from 3.15 to 4.30 at least. During the latter part of the time there is some compulsory game — hockey, Rugby football, association football, and athletics in their season. The daily time of football is forty minutes. In the cricket season boys must join in the sides, except they have leave off, which is easily got for birdnesting (if they are really collecting). In winter, if they can be spared by the heads of sides, boys can occasionally leave off football, etc., provided they take some really warming exercise, such as a run, before changing for tea.'"

"Of military drill I can speak with pleasure from an experience of its effects. It encourages promptness, attention, obedience, neatness; it is enlivening and very attractive if carried out by a good drill-master.

The amount of exercise obtained in half an hour depends, of course, on the way the drill is conducted; but, on an average, while it is not adequate to the needs of a day (no, nor half adequate), it supplies a very important need in the case of indolent boys. . . .

"From nine to ten hours of sleep are required by the majority of boys. To retire at ten and rise at six gives a minimum allowance for the oldest boys. Study before breakfast should rarely be allowed. To rise and sit an hour in a cold, badly-lighted room is enough to take away the appetite for breakfast. About eight hours is a maximum requirement for study and recitation combined in the case of older pupils.

"It is needless to say that a boarding-school ought to be in the country. But this very circumstance may entail special risks in a sanitary sense. Sewerage, which may be presumed to be well cared for in any good-sized city, is specially difficult to manage in places where there are no drains, and where public sentiment has not reached the point of demanding drains."

The paper closes with a brief reference to the sanitary arrangements proper for disposing of filth when there is no system of sewerage.

Among the papers of the 7th may be mentioned one by Mr. Colby, of New Haven, advocating disfranchisement for crime, and extending this penalty even to drunkenness. Mr. Wright, of the Massachusetts Bureau of Statistics, agreed with the essayist in his opinion as to the justice and propriety of disfranchising drunkards, and in the course of his remarks said that eighty-four per cent. of the convictions in Suffolk County were traceable to liquor.

In the evening President Angell read a paper on the relations between the United States and China, reviewing the several treaties, that negotiated by Caleb Cushing in 1844, the Burlingame treaty, and their modifications. The alleged violation of the obligations toward our citizens in China in the way of imposition of unjust duties, and the refusal of protection to foreigners were spoken of, and, *per contra*, the complaints which China has a right to make of our treatment of her citizens. The speaker defended our right to make restrictions of immigration from China, but thought the recent bill too stringent.

The closing day of the meeting was occupied largely by the discussion of the labor question, the restriction of the hours of factory labor, and a comparison of the former system with that of the present day being especially dwelt upon. The final paper, by Mr. Wright, defended strongly the factory system as an element of civilization, taking what but for the eminence of its authority might be considered an optimistic view of its favorable results to the operatives in the way of regular hours and regular pay, and claiming that wages were not growing less, but were in general adequate. That factories were not, as a rule, ill ventilated or overcrowded, and that drunkenness and crime were diminished rather than fostered by the conditions of the operatives.

The next general meeting of the Association will be held at Saratoga, September 3, 1883. The following are the officers for the ensuing year: President, Francis Wayland, of New Haven; Vice-presidents, Daniel C. Gilman, of Baltimore; Miss Maria Mitchell, Poughkeepsie; Theo. D. Woolsey, New Haven; Henry Villard, New York; and J. M. Gregory, New York; General Secretary, F. B. Sanborn, Concord, Mass.; Treasurer, F. J. Kingsbury, Waterbury, Conn.; Directors, Dorman B. Eaton, New York; Horace White, New York; Anson P. Stokes, New York; Jonas M. Libbey, New York; John Eaton, Washington, D. C.; T. W. Higginson, Cambridge; George T. Angell, Boston; Mrs. Henry Whitman, Boston; Carroll D. Wright, Boston; and H. L. Wayland, Philadelphia. The Association elected Herbert Spencer to honorary membership.

◆

PUNCTURED WOUND OF THE PREGNANT UTERUS; PARTIAL ESCAPE OF THE FŒTUS INTO THE ABDOMINAL CAVITY; RETENTION OF THE FŒTUS FIVE YEARS.

At a meeting of the Philadelphia Obstetrical Society, as reported in the *New York Medical Journal and Obstetrical Review*, Dr. B. F. Baer read a case of great interest. The patient presented herself for relief from an abdominal hernia, being also emaciated and run down from an attack of typho-malarial fever through which she had lately passed. A perforation of all the abdominal tissues except the skin was discovered at the right of the umbilicus of the size of a silver dollar, from which, when she stood, projected the abdominal hernia. Further examination showed a mass extending from the hypogastrium to the umbilicus a little more to the left than to the right. It was of the size of the uterus at the sixth month, and gave to the hand the sensation of loose bones moving upon each other. The os externum was patulous, and from it flowed a yellowish, slightly fetid fluid. The uterus was enlarged. The sound passed six inches and touched bones. The examination was painless.

Further investigation disclosed the following history: Five years before, in Ireland, the patient, when within a week of her confinement, was standing upon a chair the back of which, with the exception of two uprights, had been broken away. She was at the time collecting brambles, and, in stretching for one, over-reached herself and fell, and, in the act of falling, her right side came in contact with one of the uprights. A short time after, she was found lying on the ground in a fainting condition, from which position she was removed to bed, and a physician summoned to see her. This physician afterwards wrote to Dr. Goodell as follows regarding the case: "On examination, I found a contused wound on the lower and right side of the abdomen, and, in addition, came to the conclusion that the womb was ruptured, and that the fœtus had escaped into the cavity of the abdomen. There was intense tenderness and great distention. I immediately decided on giving her at once calomel and opium, the latter in large doses. After the third day I stopped the calomel and continued the opium. The pain and tenderness almost disappeared after a week, and I may say from that period until she left here she never had a bad symptom."

The patient declined any treatment for the uterine condition at the time of her first visit. But three months later, her health having suffered much, she placed herself under Dr. Goodell's treatment in the hospital. The evidence of septic absorption had become marked, with hectic fever and night-sweats. The cervix was dilated by one sponge and four laminaria tents, and the next day the operation was performed of removing the dead fœtus *per vias naturales*. Fenestrated polypus forceps readily grasped the contents of the uterus, but when traction was made it was found that the fœtus was firmly held somewhere. Moreover, it was so disintegrated that only the portion within the grasp of the forceps could be withdrawn with the instrument. This was repeated a number of times, each withdrawal of the forceps bringing away a bone or some broken-down soft tissue. A discharge of about a pint of very fetid, thin fluid took place at this stage of the operation. The os was now becoming so small, from contraction of the cervix, that the forceps could scarcely be made to pass, and an effort was made to secure further dilatation by the use of Molesworth's dilator, which failed. The parts were thoroughly disinfected by injections of a permanganate-of-potash solution and the vaginal neck incised. The same polypus forceps was now more readily introduced into the cavity and the mass broken up. This was followed by a profuse, thin, bloody, purulent discharge of the most fetid character. An injection of the permanganate solution was now made into the cavity of the uterus until it returned unchanged, when another effort was made to remove the contents. After working for more than half an hour, only a part of the product was withdrawn. At this stage of the operation considerable hæmorrhage occurred, and this was increased with each endeavor to dislodge the mass from its nidus. For this reason, and because the patient was becoming weak (she had now been under ether one and a half hours), it was thought prudent to discontinue further efforts for the present, and to depend upon antiseptic injections and contraction of the uterus to remove the remainder. The patient came out of the anæsthesia slowly and in a state bordering on collapse, in which condition she remained for nearly twenty-four hours, when she gradually reacted. During the next four days there was a very fetid fluid discharged from the cavity of the uterus, together with some *débris* from the decomposing mass. The patient had to be removed from the ward on account of the odor. The treatment was supporting, with very frequent irrigation of the vagina and uterine cavity with antiseptic solutions.

On the fifth day after the first operation, the patient evidently suffering from septicæmia, and there being no marked effort on the part of the uterus to throw off the remains, she was again etherized, and another attempt was made to remove them. It was found that time had somewhat disintegrated the contents, and that therefore removal would be more easily effected. Bone after bone, and occasionally a piece of soft tissue, were withdrawn, until at the end of about an hour the cavity was almost entirely emptied. For several weeks afterward, however, an occasional bone was thrown off *per vaginam.* The cavity was thoroughly washed out with the disinfecting solution, and an examination was made to discover the seat and extent of the rupture. The cavity of the uterus was large and rough, and in the right side of its body there was discovered an opening through which two fingers could be readily passed into a cavity beyond. The recovery of the patient was slow, indeed her life was despaired of for weeks, during which time she suffered from numerous pyæmic abscesses. One of these abscesses was post-ocular, and resulted in the loss of the eye. She finally left the hospital restored to health.

The diagnosis of the original injury which was made before the operation was performed, seems thus confirmed. It was that the uterus was really ruptured, but that a portion only of the child escaped through the rent, thus preventing, by pressure, a loss of blood which would otherwise have probably resulted in the death of the patient; and that the portion which projected through the rupture became encysted, thus forming a cavity continuous with the uterine cavity, the whole mass remaining harmless until, through the intercurrence of an exhausting disease, decomposition set in and it began to poison the patient.

◆

INVERSION OF THE UTERUS OF EIGHT YEARS' DURATION.

An interesting case of reduction of an inverted uterus after eight years of malposition is reported in the *American Practitioner* by Dr. W. H. Cyrus. The patient had been treated variously for ulceration of the cervix and other diseases without a true diagnosis ever having been made. Various attempts at reduction according to the Emmet and the Noeggerath methods having failed, the means which were finally successful were, in the words of the author, as follows: —

"I felt that I needed some instrument that would make pressure on the fundus and at the same time be small enough to follow it through the os. I returned home and took the vaginal tube of a family syringe and a small steel rod about one foot long with a thread cut on one end; this I screwed into the open end of the tube. I then covered the point of the tube with rubber taken from a medicine dropper and fastened it securely. Armed with this instrument, I returned on the 25th, and having brought down the uterus I indented the fundus and placed my instrument in the indentation, with the handle against my chest, and holding the uterus with my right hand, I used the left to assist in turning in the fundus. I made steady pressure for one hour, and had only succeeded in indenting the fundus about one and a quarter inches when she made an effort at vomiting, and the uterus slipped away from me and passed into the vagina. I kept up the pressure with the instrument in my right hand, while I made counter pressure over the abdomen with my left. In a few minutes she commenced vomiting, and during her straining efforts the uterus suddenly returned to its normal position, to our, as well as the patient's, great relief."

◆

INTRODUCTION OF ALIMENTS AND MEDICINES THROUGH THE NOSE.

Fernet and Martel[1] have made a number of experiments to demonstrate the possibility of introducing aliments and medicines through the nostrils.

For this purpose the patient is placed on his back, in the recumbent position, while the head and the upper part of the throat are permitted to fall somewhat backward. The gum hose of a common nursing bottle is then pushed into the posterior part of one nostril, and the fluid — either containing nutritive substances or medicine — slowly poured in. In consequence of the peculiar position of the body, the floor of the nasal cavity and the velum form an oblique plane, so that the fluid mentioned flows directly into the pharynx and induces swallowing. Generally, and especially if the fluid is poured in slowly, the expected result ensues with certainty, and in a manner by no means disagreeable to the patient; only when the fluid is poured in too rapidly, a few drops may find their way into the larynx, causing the well-known irritating cough.

---

[1] Schmidt's Jahrb., 1882, 1.

Fernet and Martel have employed this method successfully in persons in a comatose condition, in children suffering from tubercular meningitis, and even in new-born infants too weak to take the breast or the bottle. This method may also be successful in introducing medicines into the stomach which, in consequence of their bitter or nauseous taste, are rejected by the patient.

Créquy recommends, for this purpose, the introduction of a flexible gum tube (catheter). If this is pushed behind the velum, the possible reflow of the fluid by the other nostril would effectually be prevented.

Martel reports two cases: one, where, in consequence of a fall on the head, severe concussion of the brain, with trismus and utter inability to swallow, set in, and the other, a case of pneumonia in a drunkard, the patient being totally unconscious. Here the medicines — calomel and jalap in the first, musk and digitalis, in the second, case — were successfully carried into the system by the method described, and though, in consequence of their severity, the cases ended fatally, the procedure itself achieved its object. — *Medical and Surgical Reporter*, August 5, 1882.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 2, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York	1,206,590	620	310	53.07	7.58	22.26	8.07	2.10
Philadelphia	846,984	372	154	10.10	1.88	—	4.29	3.75
Brooklyn	566,689	305	158	39.03	6.89	25.25	5.58	.66
Chicago	503,304	277	179	41.52	3.25	29.60	2.52	3.61
Boston	362,535	169	72	37.82	4.72	28.36	3.87	.59
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	157	73	40.12	1.91	7.63	13.27	4.46
Cincinnati	255,708	135	65	28.15	—	12.59	7.41	3.70
New Orleans	216,140	113	32	—	—	—	—	—
District of Columbia	177,638	71	30	32.53	4.23	14.08	2.82	1.41
Pittsburg	156,381	60	32	44.55	—	21.59	10.00	11.66
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	73	50	31.51	5.48	27.40	1.37	—
Providence	104,857	41	16	36.59	4.86	24.39	—	7.30
New Haven	62,882	26	5	26.92	15.38	11.55	—	11.55
Charleston	49,999	29	10	10.76	3.45	3.45	3.45	—
Nashville	43,461	36	15	27.77	2.77	19.33	—	2.77
Lowell	59,485	24	15	37.42	—	12.94	8.33	4.15
Worcester	58,295	23	15	34.78	13.04	34.78	—	—
Cambridge	52,740	33	17	27.27	—	27.27	—	—
Fall River	49,006	23	9	62.21	4.35	52.06	—	—
Lawrence	39,178	24	12	8.32	—	4.16	—	—
Lynn	38,284	21	14	57.12	—	57.12	—	—
Springfield	33,340	13	10	61.52	—	23.07	—	—
Salem	27,598	18	10	—	—	—	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	9	3	22.22	11.11	22.22	—	—
Holyoke	21,851	8	3	75.00	—	37.50	12.50	12.50
Chelsea	21,785	11	3	18.18	—	9.09	—	—
Taunton	21,213	13	4	23.08	—	23.08	—	—
Gloucester	19,329	9	4	66.66	—	66.66	—	—
Haverhill	18,475	7	2	14.28	—	—	14.28	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	7	4	28.56	—	14.28	14.28	—
Newburyport	13,537	8	2	12.50	12.50	12.50	12.50	—
Fitchburg	12,405	3	2	66.66	—	33.33	—	33.33
Malden	12,017	3	2	33.33	—	33.33	—	—
Twenty Massachusetts towns	148,391	71	29	36.61	2 82	30.97	4.22	1.41

Deaths reported 2812 (no reports from St. Louis and Buffalo): under five years of age 1261: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 897, consumption 315, lung diseases 129, diarrhœal diseases (cholera infantum 23) 530, diphtheria and croup 122, typhoid fever 71, whooping-cough 41, malarial fever 36, scarlet fever 28, small-pox 20, measles 18, cerebro-spinal meningitis 16, puerperal fever eight, erysipelas six, remittent fever one. From *whooping-cough*, Brooklyn 16, New York 11, Boston, Baltimore, Pittsburgh, and Charleston two each, Philadelphia, Cincinnati, Milwaukee, Providence, Nashville, and Springfield one each. From *malarial fever*, New York 17, Brooklyn five, Chicago four, Baltimore three, District of Columbia two, Cincinnati, New Haven, Nashville, Springfield, and Holyoke one each. From *scarlet fever*, New York 11, Philadelphia and Chicago four each, Brooklyn, Boston, and Baltimore two each, District of Columbia, Providence, and Springfield one each. From *small-pox*, Baltimore 15, Cincinnati four, Philadelphia one. From *measles*, Cincinnati nine, New York seven, Philadelphia and Baltimore one each. From *cerebro-spinal meningitis*, New York four, Philadelphia and Chicago three each, Boston and Springfield two each, Lawrence and Chelsea one each. From *puerperal fever*, Chicago and Fall River three each, Boston and Milwaukee one each. From *erysipelas*, New York three, Chicago two, Philadelphia one. From *remittent fever*, Boston one.

Sixty-three cases of small-pox were reported in Baltimore, Cincinnati 24; typhoid fever 21, diphtheria 15, scarlet fever 10, in Boston; scarlet fever 12, and diphtheria six, in Milwaukee.

In 38 cities and towns of Massachusetts, with a population of 1,034,449 (population of the State 1,783,086), the total death-rate for the week was 24.63, against 24.29 and 30.51 for the previous two weeks.

For the week ending August 12th, in 168 German cities and towns, with an estimated population of 8,432,114, the death-rate was 26.8. Deaths reported 4340: under five years of age 2015; consumption 478, diarrhœal diseases 419, lung diseases 274, diphtheria and croup 128, scarlet fever 101, typhoid fever 65, whooping-cough 52, measles and rötheln 36, puerperal fever 16, small-pox (Königsberg two, Breslau, Heilbronn, Cologne, and Mülheim each one) six, typhus fever (Danzig, Königshütte, Berlin, and Braunschweig each one) four. The death-rates ranged from 16.5 in Mainz to 57.6 in Posen; Königsberg 45.4; Breslau 32.2; Munich 26; Dresden 27; Berlin 30.9; Leipzig 19.7; Hamburg 23.4; Cologne 32.2; Frankfort a. M. 18.2; Strasburg 21.9.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending August 19th, the death-rate was 23.4. Deaths reported 3800: acute diseases of the respiratory organs (London) 197, diarrhœa 660, whooping-cough 89, scarlet fever 84, measles 69, fever 47, diphtheria 30, small-pox (London five) 11. The death-rates ranged from 16.3 in Birkenhead to 33.4 in Nottingham; Derby 17.5; Bristol 19.6; London 20.5; Birmingham 25.4; Manchester 26.8; Liverpool 27.5; Leeds 30.4. In Edinburg 18; Glasgow 21.5; Dublin 20.1.

For the week ending August 19th, in the Swiss towns, population 494,390, there were 25 deaths from consumption, diarrhœal diseases 12, acute diseases of the respiratory organs 10, diphtheria and croup three, typhoid fever three, scarlet fever two, whooping-cough two. The death-rates were, at Geneva 14.4; Zurich 6.1; Basle 11.4; Berne 11.4.

The meteorological record for the week ending September 2d, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August–September, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 27[2]	—	—	69	55	82	—	75	—	E	—	W	4	—	6	O	—	F	—	—
Mon., 28	30.089	62	72	56	87	48	70	68	W	E	S	1	11	1	O	C	O	—	—
Tues., 29	30.196	62	75	55	81	69	54	68	NW	E	W	7	8	7	C	C	C	—	—
Wed., 30	30.134	71	89	55	71	32	70	58	W	S	SW	6	7	10	C	C	C	—	—
Thurs., 31	30.181	72	85	60	59	21	74	51	SW	SW	W	4	7	11	C	O	O	—	—
Fri., 1	30.020	71	80	65	79	58	90	76	W	SW	W	6	4	5	O	O	C	—	—
Sat., 2	30.120	68	74	63	77	73	78	76	NW	E	SW	10	8	5	C	C	F	—	—
Means, the week.	30.123	68	89	55				66										1	—[3]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

[2] Records for 27th incomplete.

[3] Inappreciable.

American Gynecological Society. — The seventh annual meeting of the American Gynæcological Society will be held in the hall of the Boston Society of Natural History, corner of Berkeley and Boylston Streets, Boston, Mass., September 20, 21, and 22, 1882.

The programme is as follows: —

September 20th. Morning session at ten o'clock. Roll-call, reception of guests, etc.

Papers: (1.) The Proper Use of Ergot in Obstetrics. By Dr. Joseph Taber Johnson. (2.) The Ovarian Corpuscle: its Origin and Characteristics. By Dr. T. M. Drysdale. (3.) Some Remarks on the Treatment of the Pedicle in Ovariotomy. By Dr. R. S. Sutton, of Pittsburg, Penn. Adjournment at one P. M.

Afternoon session at three o'clock. (4.) Leucorrhœa; its Constitutional Causes and Therapeutics. By Dr. Fordyce Barker. (5.) The Care of the Perinæum in the Second Stage of Labor. By Dr. T. Parvin, of Indianapolis. Adjournment at five P. M.

September 21st. Morning session at ten o'clock. (6.) The Relative Value of Hysterectomy and of the Complete Removal of the Uterine Appendages for the Cure of Uterine Fibroids. By J. Knowsley Thornton, M. B., C. M., of London, Eng. (7.) A New Method of Exploration, with the Pathology and Treatment of Certain Lesions of the Female Urethra. Annual Address by the President, Dr. T. A. Emmet. Adjournment at one P. M.

Afternoon session at three o'clock. (8.) Electricity in Extra-Uterine Pregnancy. By Dr. H. J. Garrigues, of New York. (9.) Notes of Twenty-Two Cases of Extra-Uterine Pregnancy. By Dr. T. G. Thomas, of New York. Adjournment at five P. M.

Business meeting at Medical Library, 19 Boylston Place, at 8.30 P. M., with closed doors. Report of the Treasurer and Auditing Committee. Action on amendments to the by-laws. Election of officers for 1883. Nominations for honorary and active fellowship by the Council. Balloting on the same. Report of the special committee on the publications of the Society.

September 22d. Morning session at ten o'clock. (10.) The Influence of High-heeled French Shoes upon the Female Form, and upon the Relations of the Pelvic Organs. By Dr. S. C. Busey. (11.) The Theory of the Mechanical Treatment of Flexions. By Dr. E. Van de Warker, of Syracuse. Adjournment at one P. M.

Afternoon session at three o'clock. (12.) New Operation for Vesicocele. By Dr. T. A. Reamy, of Cincinnati. (13.) A New Operation for Ruptured Perinæum. By Dr. J. C. Warren, of Boston. (14.) Measurements of the Uterine Cavity in Childbed. By Dr. W. L. Richardson, of Boston. Adjournment at five P. M.

The profession is cordially invited to attend the meetings.

Books and Pamphlets Received. — The Prescription of Proprietary Medicines for the Sick: its Demoralizing Effects on the Medical Profession. By C. A. Lindsley, M. D. Published under the auspices of the Connecticut Medical Society.

A Successful Ovariotomy in 1866. By Robert Newman, M. D., New York. (Reprint.)

Eighteenth Annual Report of the Trustees of the City Hospital, Boston, with Reports of the Superintendent and Professional Staff, etc. 1881–1882.

An Old System and a New Science. By F. E. Stewart, Ph. G., M. D., Detroit.

Cottage Hospitals. By Lucius W. Baker, M. D., Physician in Charge Children's Hospital Cottages, Baldwinville, Mass.

On the Nomenclature and Classification of Diseases of the Skin. By Dr. L. Duncan Bulkley. (Reprint.)

Ten Years' Experience in the Treatment of Stricture of the Urethra by Electrolysis. By Robert Newman, M. D. (Reprint.)

On Ovarian and Uterine Tumors. Their Diagnosis and Treatment. By T. Spencer Wells. Philadelphia: P. Blakiston, Son & Co. 1882.

Third Annual Announcement of the College of Physicians and Surgeons, Boston, Session 1882–1883.

Transactions of the South Carolina Medical Association, Thirty-Second Annual Session, April, 1882.

Transactions of the Medical Association of the State of Alabama, with Report of the State Board of Health. 1882.

Original Articles.

THE SOMEWHAT FREQUENT OCCURRENCE OF DEGENERATION OF THE POSTERO-LATERAL COLUMNS OF THE SPINAL CORD IN SO-CALLED SPINAL CONCUSSION.[1]

BY ROBERT T. EDES, M. D.

IT is well known that the so-called spinal concussion cannot be said to have any definite lesion attached to it, and the accounts given in the text-books of its morbid anatomy are by no means satisfactory.

This is of course natural enough, since the resistance of the tissues as well as the force and nature of the injury must be different in almost every individual case.

The present note is an attempt to show that among the various lesions which may occur in cases of this kind (not curable by a favorable verdict for damages) there is one quite definite which may come early and stay late. My evidence is, with the exception of a single case, clinical, and based on the occurrence of certain symptoms which are now quite generally looked upon as showing degeneration of the postero-lateral (crossed pyramidal) columns of the spinal cord.

It is, of course, possible, that in many, if not all, cases this is a degeneration secondary to some more focal lesion in the cord or higher up. What I wish to show is, that when the immediate effects have passed off, and sometimes when these effects have not been at all definite, the symptoms showing this lesion may be developed, and be the only prominent ones throughout the case.

They are contractures, increased tendon reflex and ankle clonus.

It is possible that these cases may throw some light on the supposed spontaneous degeneration of the postero-lateral columns.

Several cases have lately entered my hospital service in which the evidence of this degeneration has been very clear, and where the causation has seemed to be a severe shock to the spinal column, producing, however, no appreciable osseous or ligamentous lesion.

In one such case, which I saw for the first time after he had become a helpless paraplegic, the contracture of the upper extremities was so marked, although the condition of the lower, on account of œdema, bedsores, etc., could be less accurately determined, that I made a diagnosis, without sufficient inquiry into the history, of degeneration of the postero-lateral columns consequent upon a transverse myelitis due to fracture. The autopsy, however, showed that there had been no fracture whatever, nor was there any macroscopic lesion of cord or brain or their membranes.

Sections of the hardened cord (which were exhibited) showed a marked and distinctly limited degeneration of the postero-lateral columns. The fresh specimen showed these regions, as well as to a less degree the columns of Türck, to be filled with numerous granulation corpuscles.

CASE I. D. H., aged twenty-six, lead-worker, fell backward down-stairs while drunk. When admitted to the hospital the next day had cellulitis of the right leg, and various bruises on both legs. Four days after he was unable to move the right leg, and there was incontinence of urine. Two days later the left leg would not move. He had lost more or less strength in his hands. Two months afterwards it was noted that the legs "draw up" at night, and he has difficulty in straightening them. He has pain in the back of the neck and between shoulders. There was considerable muscular atrophy in the left hand, less in the right. Reflex and tendon reflex about normal. Ten days later the ankle clonus was very well marked. The patellar reflex was attended with several vibrations. There was no (slight ?) olecranon tendon reflex. From this time his condition continued about the same, although he himself thought he improved. Attempts at voluntary movement were attended with strong spasmodic movements in both legs, which could easily be excited also by the usual procedure for obtaining ankle clonus.

He was discharged from the hospital not relieved. In this case the postero-lateral degeneration may perhaps have been secondary to some more limited injury at first, say, for instance, small hæmorrhages.

This man had a lead line on his gums, and lead was at one time found in his urine. This point is interesting in connection with a possible affection of the anterior horns, and the atrophy of the muscles of the hands noted early in the case.

CASE II. T. D., laborer, fell down-stairs eight days before his entrance into the hospital, and thinks he struck on his head, but has no bruise anywhere. Immediately after the fall he lost the use of both arms and hands. He can now move his right elbow a little. His legs are rather weak, so that he staggers on attempting to walk. There has been twitching of both legs for the last two days. The next day after entrance he does not sleep well. He complained of pain darting down the arms, which, he says, began immediately after the accident. The muscles react well to the faradic current. The paralysis disappeared rapidly and almost completely, and it was after his officiation for some time as a volunteer nurse, and about two months after the accident, that it was found that the tendon reflexes of the upper extremities were greatly exaggerated, moderate taps upon the tendons of the biceps, triceps, supinator longus, deltoid, pectorales, and even the sterno-mastoids exciting decided, and in some instances, very active responses. Patellar tendon reflex somewhat increased; no ankle clonus. He was discharged relieved.

CASE III. J. C., aged thirty-five, laborer in sewer, was injured by the caving in of sewer seven years ago, and laid up for a week. There is no history of fracture. Has been unable to do a full amount of work since, and his present condition has developed itself gradually. His patella reflex is much increased, the ankle clonus extreme. He feels strong, can walk, and, in fact, walked some distance to the hospital. He cannot walk fast, however, and has a characteristic clinging (spastic) gait. There was much increase of excitability during a few days under the use of strychnia. While in this condition a tracing made upon a registering drum, by causing his toe to make and break a circuit while his foot rested on the heel, shows a regularity of vibration like that of a tuning-fork. Tendon reflex in the upper extremity was very decided, but not so extreme as in Case II. Upon stopping the strychnia this irritability was considerably diminished, though still more than normal, and the clinging gait was unchanged.

---

[1] Read before the American Neurological Association, June 23, 1882.

CASE IV. J. M., expressman, fell on his back across a wheel, November 17th, fracturing his radius and receiving other injuries to hand and arm. His legs soon began to draw up. and he had pain and twitching in them, which continued until about January 1st, five weeks before his transfer to my service. He was obliged to be catheterized for five or six days. When I first saw him, early in February, his feet and legs were very œdematous, and he had several bad bedsores. It was difficult to make any minute observation of the nervous condition of his legs, but he could move them a little. Soon after it was noted that the tendon reflex of the triceps cubiti was well marked, and shortly after his hands and arms showed in the most decided manner extreme contraction, resistance to any extension much beyond a right angle, and great muscular atrophy. He died of exhaustion, after extensive sloughing, on March 12th.

A careful autopsy showed no macroscopic lesions of the nervous centres except a slight lepto-meningitis of the brain. Unfortunately, the medulla oblongata was not preserved for the microscope, and the upper part of the cervical region of the cord was not examined. Throughout the rest of the cord the examination of the fresh specimen showed extreme granular degeneration of the postero-lateral columns, and also of the columns of Türck. Hardened specimens enabled the lesion to be more exactly located, so far as the posterior columns were concerned, by the condition of the neuroglia, but it was not to be so easily made out in the anterior. The altered region, instead of presenting its usual evenly reticulated appearance, with each mesh containing an axis cylinder, showed many spaces much larger than normal, while the neuroglia was thickened and hypertrophied, and also showed a deeper staining with carmine. In one specimen stained with logwood the color was so much more intense in the degenerated portion as to make it very obvious to the naked eye. It was to be noted, however, that while the staining seemed to show the degeneration extending to the surface of the cord, an examination with a higher power disclosed a ring of normal tissue inclosing its outer border, thus marking out very definitely the limits of the descending peduncular tracts. This change extended throughout the whole of the cord, which was examined on both sides. It is unfortunate that the medulla oblongata also could not have been under the microscope.

I have used the words "tendon reflex" in describing these cases as being the shortest and best-understood term, although well aware that it is probably not in the strictest sense a reflex phenomenon.

I may make here a few remarks in regard to the tendon reflex of the upper extremities, which has been somewhat less studied than that of the lower. It is apparently not quite so easy to obtain, but may in almost every case be shown in several tendons, and sometimes very markedly, with a little percussion apparatus, intended for ordinary thoracic percussion, contrived by my senior interne, Dr. Browne. It consists of a little hammer mounted upon one side of a handle which bears at its extremity a rubber pleximeter. It can be raised by one finger of the hand which holds the pleximeter, and is brought down by a rubber spring. It strikes a quick, sharp blow upon a tendon which may be made somewhat tense by the pleximeter. The force of the blow may be regulated by the position of the spring, or made constant in order to estimate, for instance, the sensitiveness of the corresponding muscles upon the two sides. It was used in connection with an electric device for measuring the time of latent irritation, by the simple expedient of winding one wire around the pleximeter and connecting the other with the hammer. The blow of the hammer thus makes the circuit. With this and with the ingenious pendulum myograph of Dr. J. J. Putnam I have examined the time of latent irritation in a normal case and in one where the irritability was much increased (Case III.), and do not find that it is much affected. The muscle in the pathological condition reacts more vigorously, but the time is not materially shortened.

The clinical import of greatly increased tendon reflex of the upper extremity is probably about the same as that of increased patella reflex and ankle clonus for the lower, but the range of variation in different healthy individuals seems much greater. Its absence, I am inclined to think, has little or no significance.

◆

THE USE OF THE OBSTETRIC FORCEPS.[1]

BY J. H. MC COLLOM, M. D.

EVER since the introduction of forceps in cases of labor, about the year 1647, the discussion pro and con has been carried on with great vigor, and in some instances with marked personal feeling. To Dr. Chamberlin belongs the credit of having first used forceps. Like every appliance in medicine and surgery this is capable of doing much harm in injudicious and unskillful hands, but is productive of much good when properly used. The German physicians use the forceps much more frequently and much earlier than the English. The French rather more frequently than the English, and not quite as often as the German, while in America it is the custom to follow the German practice. In this paper I have to report twenty-five cases of labor, in thirteen of which forceps were applied somewhat earlier than is usual, and have compared them with twelve cases in which nature was allowed to take its course. In the cases in which the forceps were used it will be seen, I think, that there was no material injury to the mother or child; that the lacerations of the perinæum were not as extensive; and that the period of convalescence was not as long as in the natural cases. In many of the works on female diseases it is said that vesico-vaginal fistula is always caused by forceps, while other authors state that the injury to the bladder is the result not of the use of forceps, but is due to the sloughing of the soft parts caused by the long continued pressure of the head of the child. The latter view is much nearer the truth than the former. If the precaution is taken, as should always be the case, to empty the bladder, it is difficult to understand how this accident can occur. It is a well known and accepted fact that the soft parts of the mother, and the head of the child, will bear a very considerable amount of pressure for a short time much better than even a limited amount for a long time. Laceration of the cervix is another cause of danger, but if the instrument is not applied until the os is well dilated and traction is made in the axis of the pelvis the danger is certainly no greater than in unassisted labors. Rupture of the perinæum is much more frequent and more extensive in natural labors than when the forceps have been used, at least such has been my experience. I think that by pressing the head well forward under the pubic arch, and by not being in too great a hurry to extract the child, we are much less likely to have a laceration than when the head is projected by the powerful *vis a tergo* of a contracting uterus. I know that this view is somewhat at variance with the opinions of the accepted authorities on the subject, but I am convinced that it is the correct one. Injury to the child such as the loss of an ear, compression of the brain causing paralysis, and fracture of the bones of the cranium, are accidents which may occur. If, however, the forceps are properly applied, and the blades lock easily, the danger of any such mishap is very slight. Every practitioner has his favorite kind of forceps, and I will allude only to the axis-traction forceps of Dr. Simpson, of Edinburgh, described in the *Edinburgh Medical Journal*, for September and October, 1880. It seems to me, however, that, although the theory is good, the instrument is somewhat cumbersome and likely to get out of order. The inventor claims that much less force is required than with forceps of the ordinary shape, because by the use of the tractors the power can be applied in the direct line of the axis of the pelvis, which he claims is impossible with other instruments.

---

[1] Read before the Boston Society for Medical Observation, January 16, 1882.

CASE I. Mrs. A., aged thirty-five years, primipara. I was called to the patient in the first stage; the os was partially dilated, and the head presenting in the first position. About two weeks previous to her confinement the woman had fallen down stairs, and immediately after had a profuse hæmorrhage, which stopped without medical aid. The diagnosis of partial separation of the placenta and consequent death of the child was made. The labor progressed very slowly, the contractions were at times quite frequent and powerful, and at times quite feeble. The head, however, advanced slowly, and at last was delivered. The child had evidently been dead some time. No injury to the perinæum. The placenta was removed by the hand. The woman was much exhausted, the second stage having lasted ten hours. The convalescence was tedious, without any particular complication. In this case I think a mistake was made in not applying forceps at the expiration of five or six hours.

CASE II. The same patient was confined about three years after. Presentation cephalic, second position. When called the os was partially dilated. Dilatation went on regularly, the head became engaged, and advanced slowly. After waiting four hours, and finding that the progress was extremely slow, and learning wisdom by the previous case, ether was administered and the forceps applied. The woman was delivered of a healthy male child. No injury to the perinæum. The convalescence in this case was rapid and without complication. Not a trace of any injury to the head of the child from the forceps could be detected.

CASE III. Mrs. B., aged twenty-eight years, primipara. Head presenting in thefi rst position. The first stage was without complication. The second stage commenced with every appearance of a speedy delivery, but at the end of five hours, although the head was nearly resting on the perinæum, the contractions became short and feeble, and, as the woman was becoming exhausted, it was decided to apply the forceps. A considerable amount of force was required to extract the child, a large male. Perinæum intact. The child was cyanosed, but after artificial respiration for five minutes it began to breathe and to cry lustily. No mark of the forceps on the head. The woman made a good recovery. It may be remarked here that one year previous to her confinement she had been delivered of a large hydatid mass.

CASE IV. The same patient was confined two years later; labor was somewhat tedious. The second stage lasted five hours, but forceps were not used. The convalescence was extremely slow, and there was a marked contrast between the condition of the woman in this confinement and the previous one. There was marked tenderness in the region of the ovaries, and at one time septicæmia seemed imminent. No reason for this condition could be discovered, as the care and surroundings of the patient were the same as during her first confinement.

CASE V. Mrs. C., the patient, was a woman thirty years of age, primipara. First stage somewhat protracted, and the second stage six hours in duration. Head in the second position. No instruments were used. The child, a female, was born alive, but was extremely feeble. The perinæum was slightly lacerated, but did not require the insertion of sutures. The recovery in this case was extremely tedious, complicated with mammary abscess, and it was four weeks before the patient was able to leave her bed. She also suffered from retention of urine, and it was necessary to pass the catheter three times a day for ten days.

CASE VI. Two years after, I was called to attend the same patient in her second confinement. The head presented in the second position. The labor was a very easy one, and although there was a slight tear in the perinæum no sutures were used. The convalescence was uncomplicated, and was much more rapid than in her first confinement.

CASE VII. Mrs. D., primipara. Head in first position. The first stage was twenty-four hours long, and although morphia was administered for three successive hours the woman did not have any rest. The contractions were more and more feeble, and as the woman was becoming exhausted ether was administered and the patient kept fully under its influence for three hours. Dilatation then went on quite rapidly; the membranes were ruptured, and the head became engaged. Progress was now quite slow, and ether was from time to time given, but without causing complete unconsciousness. There was considerable delay caused by a rigid perinæum. This, however, finally dilated, and thirty-six hours after the commencement of the first stage, a living male child was born. He had a very large head and an immense caput succedaneum. No injury to the perinæum. There was considerable hæmorrhage, and the placenta was removed by passing the hand into the uterus. Ergot was then given, and the uterus contracted fairly well. The woman made a good recovery, though it was somewhat slow. In this case I think a mistake was made in not applying forceps, for then the mother might have been relieved of a very considerable amount of suffering.

CASE VIII. Mrs. K., a large, well formed woman, thirty-one years of age, had the misfortune to fall in the street, and striking on the edge of the curbstone, caused a severe contusion of the left side. Patient was within about two weeks of her confinement. She was taken to a neighboring drug store, and as soon as possible was removed to the Chardon Street Home. Labor pains commenced about two hours after her fall. When she was seen it was about three hours after the receipt of the injury. The contractions were quite strong, but the os was only slightly dilated. The pains continued to increase in severity, but without any appreciable effect on the os. The presentation, which was that of the side of the child, was extremely difficult of diagnosis. Ether was given, and an attempt made to change the position by manipulation, but without avail. It was then decided to resort to manual dilatation and version. Dilatation was effected in about three quarters of an hour, the hand passed into the uterus, and the feet brought down. The body was extracted without much difficulty, but the head, which was quite large, was arrested at the outlet, and forceps were used to remove it. The child was dead, and was about the usual size of the fœtus at full term. The hæmorrhage was inconsiderable, but it became necessary to remove the placenta, which was lying perfectly free in the uterus. Ergot was then given, and the uterus contracted well. There was no injury to the soft parts of the mother. The woman made a very slow recovery, and complained for a long time of pain near the seat of the injury. Whether the child was killed by the fall or its death was caused by the manipulation, I am unable to say. I could not, however, feel any pulsation in the cord when my hand was passed into the uterus for the purpose of turning. The woman had passed through three previous confinements without any trouble.

CASE IX. S. L., twenty-three years of age, was a rather spare, delicate woman in her first confinement. The head was in the second position. The first stage was short and easy. The head became engaged, and for two or three hours everything progressed favorably. The pains now became feeble and irregular, and for an hour, although the head was not impacted, it did not advance at all. A few strong pains now forced the head well down to the perinæum, which was extremely thick and fleshy. After waiting a sufficiently long time, and finding that very little if any progress was being made, it was decided to apply forceps. While making the necessary preparations a most tremendous pain came and forced the head until it pressed on the perinæum, which now commenced to dilate slightly. This was very quickly followed by a second extremely forcible contraction, which, in spite of all my endeavors, tore the perinæum up to, but not into, the sphincter ani. The body of the child soon followed, and after sufficient lapse of time the placenta. The uterus contracted well. Five silk sutures approximated the edges of the tear. One quarter of a grain of morphine was given, and the bandage adjusted. The lying-in was extremely tedious, complicated with very large and painful hæmorrhoids, and an extremely obstinate diarrhœa. The urine was drawn every eight hours for ten days. The perinæum healed throughout the whole extent of the tear. The child was born alive. In this case the application of the forceps would have prevented the extensive laceration of the perinæum.

CASE X. Mrs. D. This patient was about thirty years of age; well formed and healthy, primipara. Nothing remarkable in the first stage. Head in the second position. The second stage commenced well, and there was every prospect of speedy delivery. A short time, however, after the head became engaged the pains were irregular; a strong expulsive pain would be followed at longer and shorter intervals by very weak and ineffectual contractions. The perinæum, as in the former case, was quite thick, but it was easily dilatable. After waiting for some little time, and finding that the contractions were becoming weaker and very irregular, I decided to use forceps. Ether was administered, instruments applied, and a live male child, weighing eight pounds, extracted. The perinæum was slightly torn, and two silk sutures were inserted. The patient was catheterized for eight days. The perinæum healed well, and the woman made a good recovery.

CASE XI. A. B., a somewhat small, delicate woman, seventeen years of age. When called the os was very slightly dilated; vagina moist. Head presenting, but was unable to make out the presentation fully. At the expiration of eight hours the os was dilated. The head became engaged, but advanced very slowly, not so much from narrowness of the passages as from the lack of sufficiently powerful expulsive pains. After waiting about twelve hours, and finding that the progress was becoming slower and slower, forceps were applied, and a living male child, weighing about eight pounds, was extracted. The perinæum was torn, and required three sutures to approximate the edges. No mark of the forceps on the child. The patient did remarkably well for about ten days, when, without any premonitory symptoms, she was taken with a violent rigor; pulse and temperature quite high; marked tenderness of abdomen; offensive lochia. The vagina was washed out with a solution of thymol; large doses of quinine given; opium sufficient to alleviate the pain. Thirty-six hours after the chill the woman was quite comfortable, although the pulse and temperature continued quite high. The tenderness had nearly all disappeared from the abdomen. Tongue had commenced to clear. The patient continued to improve for one week, when she was taken with a moderately severe attack of measles, from which, however, she recovered in due time. The perinæum healed. When the instruments were applied in this case, although the woman had been in labor some time, she was very little exhausted. I do not consider that the rigor had anything to do with the use of instruments, but was one of those unfortunate complications which so often occur in the puerperal state.

CASE XII. This patient, a woman, or rather girl, sixteen years old, was admitted to the Chardon Street Home with the statement that she had been in labor five hours. The os, however, was only slightly dilated. The dilatation went on slowly, but the head made very little advancement. As the patient was becoming exhausted, and as no progress was being made, ether was administered and the forceps were applied. Head was in the second position. A male child, weighing about seven pounds, was extracted. No injury to the perinæum or any of the soft parts of the mother. The patient did remarkably well, and at the end of two weeks was out of bed.

CASE XIII. Mrs. B. was a very small woman, twenty-five years of age at the time of her first confinement. When called the os was well dilated. Head in the third position. Contractions were feeble, with long intervals of rest. The head made very little progress. After waiting five hours, and finding that the head was not advancing as rapidly as might be wished, ether was administered, the forceps applied, and a large female child, weighing ten pounds, was extracted. A slight tear in the perinæum required two silk sutures. The mother did well, although the convalescence was complicated by a small abscess which formed just inside the vulva on the left side of the vagina. As the mother weighed only ninety pounds, and was only four feet in height, and the child, as stated above, weighed ten pounds, it was remarkable that she went through the confinement so well.

Case XIV. A. B. was twenty-seven years old when she was confined with her first child. When seen the os was fully dilated, and the head well engaged in the first position. The patient had been drinking to excess. The contractions were sufficiently strong to propel the head well down to the perinæum, and then the pains stopped. After waiting an hour and finding that there was no prospect of a natural delivery, forceps were applied without ether, and a living female child was delivered. No injury to the soft parts of the mother. The placenta was removed by the hand, followed by a smart hæmorrhage, which was finally controlled by manipulation and ergot. The mother and child did well.

Case XV. Mrs. S., a healthy German woman, in her tenth confinement, was under the care of a midwife, who sent for me to apply forceps. The patient had been in labor twelve hours; the os was fully dilated, but the head was not engaged. There was a very prominent exostosis on the promontory of the sacrum, diminishing the antero-posterior diameter of pelvis so much that the head could not advance. Ether was administered, and forceps applied with some considerable difficulty, on account of this projection of the promontory, but on applying force the instruments slipped. I adjusted them a second time, and endeavored to extract with like result. Being now convinced that the curve of my forceps was not great enough to allow of application, I made a third attempt with a pair with a greater curve, and applied them without much trouble. A living female child of the average size was extracted. There was a contusion on the left side of the child's head; this sloughed, but finally healed. The mother made a good recovery. In fact, contrary to my express orders, she left her bed on the fourth day. The injury to the child's head was caused no doubt by the slipping of the forceps.

Case XVI. The same patient was attended by me in her eleventh confinement, three years later. In this case I applied the forceps as soon as the os was fully dilated, taking the precaution to use the pair I had used in the last confinement. The child was delivered without any mishap. The placenta was removed by the hand passed into the uterus. The woman made a good recovery. This woman had borne eleven children, and never had a natural delivery; two of the children were delivered by version, and the rest by forceps. The question might be asked, why was not version tried in the latter cases? It seemed to me that there was less danger to the child in the use of forceps than in podalic version.

Case XVII. Mrs. P., thirty years of age, primipara. She was a strong, well-built woman, inclined to *embonpoint*. Nothing worthy of note in the first stage. Head in the second position. The second stage commenced well; the contractions were strong, and for a time the head advanced reasonably fast. At the expiration of three hours, although the pains had been very powerful, so much so that I feared rupture of the uterus, the head had not advanced. It was decided to apply forceps. The head was resting on the perinæum, which was extremely thick and fleshy. The child was extracted after repeated efforts and the use of a very considerable degree of force. The perinæum was badly torn. The placenta came away naturally. Four wire sutures were passed to approximate the torn edges. The woman made a very slow recovery, complicated with mammary abscess. She was also troubled with retention of urine, requiring catheterization every eight hours for four weeks. The perinæum healed well, and the patient fully recovered.

Case XVIII. Mrs. B. This patient was thirty years of age, quite tall, and well developed. Primipara. Head in the first position. She stated that she had quite severe pains for six hours. Upon making an examination I found the os partially dilated. The dilatation went on quite rapidly, and the head became engaged. At first the head advanced as rapidly as could be desired in a primipara. At the expiration of four or five hours, however, the woman became more or less excited, the pains were shorter, and the head ceased to advance. After waiting an hour or so, and finding that no progress was being made, I decided to put on the forceps. Patient was etherized, the forceps easily adjusted, and a large living male child extracted. There was a very slight laceration of the perinæum, but it was so slight that no sutures were required. The woman made an exceedingly good recovery.

Case XIX. Mrs. M. was twenty years of age when confined for the first time. She was well and strong, with no deformity of the pelvis. Head in the second position. When summoned dilatation had hardly commenced, although the patient stated that she had had pains nearly all night. She was extremely irritable, and therefore one quarter of a grain of morphine was given, which had the result of inducing three or four hours' good sleep. The os now dilated quite rapidly, and the head became engaged. The progress was slow until the head had nearly reached the perinæum. The woman, however, was becoming exhausted, and, although the second stage had lasted only four hours, it was decided to apply forceps. Ether was given, and a living female child, considerably cyanosed, was extracted. A slight tear in the perinæum required two silk sutures. She had retention of urine for ten days, but with that exception made a good recovery. The perinæum healed well. I have attended the woman in three confinements since then, and the labors have been remarkably short and easy; so much so that in two of the cases I was not able to arrive at the scene of action until the children were born.

Case XX. Mrs. B. was twenty-four years of age at the time of her first confinement. She was a delicate woman, but had always enjoyed good health. Nothing worthy of remark in the first stage. Head in the first position. The second stage was somewhat prolonged. The child was born alive, but the mother, in spite of all my endeavors, had a very extensive tear of the perinæum. Four silk sutures were used. The patient made a good recovery.

Case XXI. Mrs. K. This patient was a very delicate woman of phthisical tendencies. She was twenty years old at the time of her confinement. The first stage was natural. Head in the third position. The second stage was not prolonged; but there was very extensive laceration of the perinæum into, but not through, the sphincter ani. Five silk sutures approximated the edges. The recovery went on favorably until the eighth day, when the patient had a severe rigor and marked tenderness of the abdomen, which was tympanitic. Pulse 120; temperature 104° F. Morphia subcutaneously and large doses of quinine were administered. For forty-eight hours the woman was in a very critical condition; but at the expiration of that time she commenced to improve, and finally recovered. The perinæum did not heal, however, but there was sufficient power in the sphincter ani to retain the fæces, except when the patient had diarrhœa. Since her confinement the woman has developed marked phthisical symptoms.

CASE XXII. Mrs. C. This patient was twenty-five years of age at the time of her first confinement. The first and second stages were not prolonged to any great extent. There was, however, an extensive tear of the perinæum, which was sewed up in the usual way. The tear was greater than any that had occurred in my forceps cases.

CASE XXIII. The same patient was delivered by me five years later. This was a face presentation. The first stage progressed rapidly. An attempt was made to rotate the head by manipulation, but without avail. The head advanced slowly. The patient commenced to be exhausted, and ether was administered, which had the effect of making the contractions somewhat more regular. Although the head was advancing slowly, I decided to fully etherize and apply the forceps, but before the patient was fully under the influence of the anæsthetic a powerful contraction propelled the head to the outlet, and the next pain delivered it. The perinæum was torn, and the edges approximated by three silk sutures. The woman made a slow recovery. There was considerable hæmorrhage, which was, however, controlled by manipulation and ergot. It is worthy of remark that although the woman was perfectly healthy her milk acted as a poison on the child, so much so that she was obliged to give up nursing it and resort to feeding.

CASE XXIV. Mrs. A., a perfectly healthy woman, was attended by me in her first confinement. Head in the second position. The first and second stages were not prolonged, and were not exceptionally severe. The perinæum was torn, however, and required three silk sutures. The woman made a good recovery.

CASE XXV. Mrs. C. was admitted to the Chardon Street Home while in labor, and when I saw her the head was well engaged. The progress was reasonably rapid until the head rested on the perinæum, when a tremendous pain shot the body of the child, with the placenta, some two feet. The perinæum was very badly torn, and sutures were inserted. The rent healed well, and the woman made a fair recovery, although she complained of paralysis of the left leg for some little time. This, however, improved, and at the time of her discharge from the institution she was nearly well.

It has been shown, I think, from the history of these twenty-five cases —

(1.) That the convalescence in the forceps cases was not any longer, if as long, as in the natural ones.

(2.) That there was no great injury to the soft parts of the mother. The most extensive rents in the perinæum were in the unassisted labors.

(3.) That, except in one instance, there was no injury to the child. This was so slight as hardly to deserve mention.

PERCUSSION OF THE HEART IN HEALTH AND DISEASE.[1]

BY HERBERT B. WHITNEY, M. D., LATE MEDICAL HOUSE OFFICER, BOSTON CITY HOSPITAL.

ONLY a small portion of the heart is in immediate relation with the chest wall, causing what is known as the area of absolute cardiac flatness. The lower border of this area, corresponding to a part of the lower border of the heart, cannot always be defined by percussion since it is continuous with the flatness of the lesser lobe of the liver which lies immediately beneath the diaphragm at this point. Ordinarily the anatomical position of the lower border of the heart corresponds nearly with the upper border of the sixth left costal cartilage. The right border of the area of absolute flatness is a perpendicular line, parallel with and one centimetre to the left of the median line, forming below an obtuse angle with the upper border of hepatic flatness on the right, and extending upward to the level of the fourth costal cartilage. From this point a curved line drawn downward and to the left, with an outward convexity, to a point on the upper border of the sixth rib, six to eight centimetres from the median line, completes the area of absolute flatness.

This area is, however, of far less importance than that known as the area of relative cardiac dullness, which represents the true limits of the heart above and to the left. On the wall of the normal chest this area is defined as follows: Continue the perpendicular right border of absolute flatness upward to the level of the third costal cartilage; from this point draw a curved line, in the same way as before, to a point in the upper border of the sixth rib, nine to eleven centimetres to the left of the median line according to the size of the individual. Anatomy shows us that the right border of the heart extends nearly to the right border of the sternum. On the other hand, the præcordial area, as has just been stated, stops abruptly at a perpendicular line one centimetre to the left of the median line of the body. The percussion note over the sternum is indeed of a somewhat higher pitch than that of the chest wall beyond; but no more so than over that portion of the sternum which lies above the normal situation of the heart, and always of much better quality than that elicited over the area of relative dullness. Whether or not this is susceptible of explanation, it is undoubtedly the fact.

Within the lesser area above described the percussion note is as a rule absolutely flat. In others, and indeed very frequently at its lower border, the note is modified by tympanitic resonance transmitted from the stomach, the fundus of which when distended fills that portion of the arch of the diaphragm not occupied by the lesser lobe of the liver and the spleen. The percussion note over the remainder of the total area is simply dull. It can best be differentiated from the surrounding pulmonary resonance by rather more forcible percussion than that which is most desirable for mapping out the area of absolute flatness. It is best, however, to err on the safe side, and percuss too lightly rather than too forcibly. The area of absolute flatness is most easily and accurately defined by the gentlest possible percussion, beginning within the flat area, and moving the finger gradually outward until a better note is obtained. On the contrary, it is easiest, for the writer at least, to find the outer limit of relative dullness by ad vancing gradually from good pulmonary resonance toward the centre of the cardiac area. At all events by constantly following one plan or the other, slight shades of difference in the percussion note may be more readily detected.

---

[1] Graduation Thesis, recommended for publication.

In this connection it is proper to mention a point in the practice of percussion which the writer has found of inestimable value; the constant habit of making a mark, best with an ordinary stylographic pen, wherever the slightest change in a percussion note is detected, and afterward of completing by lines the boundaries of the different areas. This seems a trivial matter, and often indeed the lines will be found to represent nothing which cannot be explained by normal anatomical conditions. But sometimes such a line, presenting as it does to the eye a certain form or outline, will suggest inferences in regard to diagosis which might otherwise have failed to appear.

This plan of marking is especially important in percussion of the heart, where it is far better to estimate and record the size of the organ by measurement than by its relation to other parts. The position of the apex with reference to the nipple is the guide usually recommended. But in any individual we may expect to find the nipple anywhere from the upper border of the fourth to the lower border of the fifth rib. The plan of drawing a semicircle, with a radius of two inches, from a point midway between the nipple and ensiform, in order to define the upper and outer limit of the area of absolute flatness, will often be found even in males to fall wide of the actual limit as ascertained by other and surer methods. This is owing in part to the great differences in the obliquity of the ribs, which brings the apex of the heart sometimes near, again quite distant from the tip of the ensiform. Measurement, however, though open to some objections, is certainly far superior to either of the above methods. It varies of course with the size of the individual, but knowing the latter and the usual limits the normal measurement in any given case can be quite accurately estimated. These limits have been found by the writer, in a large number of presumably normal hearts, to be between eight and eleven centimetres, measureing from the apex to the foot of the perpendicular boundary. This right border of the præcordia sometimes varies with reference to the median line, hence measurement from the latter might give a wrong result.

This leads to the mention of some of the unusual positions in which the perfectly normal heart may be found in a healthy individual. Its attachment being wholly at the base, the position of the apex is naturally subject to the most variation; in fact, such a variation can hardly be said to be unusual. Its right and upper borders are, however, occasionally found out of their normal situation. The former may be two or even three centimetres to the left of the median line, probably as a result of old pleurisy of the left side, with incomplete expansion of the lung. Thus the apex is carried considerably to the left, and such a condition might readily be mistaken for cardiac enlargement were not the right border carefully defined. Again, the upper border of the præcordia may be found as high as the middle of the second intercostal space, seen by the writer in one case where the probable explanation seemed to be excessive tympanitic distention of the abdomen. It is, however, very unusual to find either the right or upper border in other than their normal situation except in conditions of disease to be hereafter mentioned.

In a healthy individual it would seem as though the limit of relative dullness on the left would represent unmistakably the position of the heart's apex. That this limit is, however, usually two centimetres at least beyond the point where the apex beat is heard and felt most distinctly must have been observed by every one. It seems, therefore, beyond doubt that the apex beat does not, in a very large proportion of cases, represent the true position of the heart's apex. In other words, it is not usually the extreme tip of the heart which strikes the chest wall during systole, but a point one to two centimetres nearer the base of the organ. How else can we explain the fact, unless we suppose that the pericardial sac projects far enough beyond the border of the heart to produce this added line of dullness. In some cases, however, the position of the apex beat corresponds with the outer limit of relative dullness, and it seems most natural to explain these differences by variations in the conformation of the apex.

It would, however, appear less plausible to account in like manner for the frequency with which we find the apex beat in the fourth instead of the fifth interspace, not only in the recumbent but also in the erect posture. This has indeed been so common in the experience of the writer that it would be difficult, except on the strength of authority, to state which is the more common of the two. This is explicable only on the supposition that the actual position of the apex varies in different individuals; not necessarily, however, between as wide limits as might at first be supposed. The impulse of the apex is never obtained over a rib, but always in an interspace; and yet the apex must often lie directly beneath the fifth rib, the impulse in such a case predominating in the fourth or fifth interspace, according as the apex lies slightly above or below the middle of the rib. In other words, we need only suppose a variation in the position of the apex, equal in extent to the width of the fifth rib, to explain the much wider variation in the position of the impulse. This is merely hypothesis, and it is of course possible, if not quite probable, that the lower border of the heart corresponds sometimes with the upper border of the sixth, sometimes of the fifth rib, a variation of at least four centimetres.

Among abnormal conditions of the præcordial area, the first to be mentioned is that produced by cardiac enlargement. We may have either hypertrophy or dilatation of either ventricle, and any or all of these conditions may be combined in varying proportion. Percussion affords valuable means of distinction between affections of the right and left ventricles, but the predominance of hypertrophy on the one hand, or dilatation on the other, is to be inferred chiefly from other signs. In enlargement of the ventricles we rarely find any alteration in the extreme upper boundary of the præcordia. The change is nearly always in one or more of the other directions, the apex usually moving downward and to the left, as shown on percussion by extension of the area of relative dullness in these directions. The liver does not normally extend toward the left much beyond the outer limit of absolute cardiac flatness; hence, immediately beneath the heart's apex we ordinarily obtain a tympanitic note on percussion, or, if the apex is in the fourth interspace, modified pulmonary resonance. It is, therefore, easy to see how a low position of the præcordial apex may be defined by percussion alone, without the aid of palpation or auscultation. This fact becomes of importance in diagnosis between ventricular enlargement and pericardial effusion. In the latter we have a similar downward and outward displacement of the outer angle of the præcordia, without such a corresponding one in the site of the cardiac impulse as would necessarily occur in ventricular enlargement. On the contrary, in effusion the apex beat is more apt to be elevated, and the interval between it and the outer limit of relative dullness is much increased.

In moderate cardiac enlargement the area of absolute flatness may not be increased; it usually is, however, owing to the increased pressure exerted by the enlarged heart on the surrounding lung tissue, which is thus crowded back from its overlying position.

As a means of distinction between enlargement of the right and left ventricles, much importance is always attributed to the direction in which the præcordial area is increased. Undoubtedly a considerable downward displacement of the apex may be accepted as evidence of enlargement of the left side. On the other hand, marked displacement toward the left, with but little downward, shows that the right ventricle is at least somewhat involved. As to the effect produced by enlargement of the right ventricle alone, there is much difference of opinion. Flint states that in such cases the extension of the præcordia is almost always wholly to the left. DaCosta simply says that the transverse diameter of the heart is chiefly increased, without indicating what effect this would have in altering the shape of the præcordial area. Fothergill denies that there is any extension of the latter toward the right, and depends on a downward displacement of the base of the præcordia for diagnosis of this condition. There is, indeed, usually a slightly tympanitic quality to the note elicited over the thin border of the lesser lobe of the liver which is not always transmitted to the area of absolute flatness, and in such cases we may, by careful percussion, define the lower boundary of the præcordia. But such a note is nearly as often obtained over this area, and as the finger moves downward we get simply a gradual increase in this tympanitic character until we suddenly strike upon the full tone of the stomach. Undoubtedly in enlargement of the right ventricle there is downward extension of the præcordia, but can this be surely ascertained by percussion in enough cases to make it especially valuable in diagnosis?

We do, however, find extension of the præcordia toward the right in certain cases where pericardial effusion can be eliminated, and which are usually the very ones in which enlargement of the right ventricle would seem to be almost certain from other signs. We find it in connection with the strong epigastric pulsation of emphysema, and in disease of the mitral valves with their accompanying œdema and accentuated pulmonic second. On percussion, instead of the tolerably good note ordinarily elicited over the sternum, we find marked dullness filling up more or less the angle between the flatness of the normal heart and that of the right lobe of the liver. In a well-marked case, such as is often seen, a nearly straight line, drawn from the upper angle of the normal præcordia to the upper border of hepatic flatness, at a point four to five centimetres or more to the right of the median line, will include this added area of relative dullness. Where there is no possibility of pericardial effusion, what can such an increased area of dullness represent if not an enlargement of the right ventricle?

Cardiac enlargement necessarily produces compression of the displaced lung, hence the pulmonary resonance may become slightly modified in the immediate vicinity, either a trifle dull or tympanitic.

Of pericardial effusion percussion affords the most valuable sign we can acquire. Here the præcordia becomes almost uniformly enlarged in every direction. At the level of hepatic flatness its right boundary may be several centimetres beyond the right border of the sternum, and the line connecting this point with the upper angle of the præcordial area has much more of an outward curve than that of cardiac enlargement. One of the most significant signs of effusion is the extension of the upper limit of relative dullness which almost invariably occurs, and may reach beyond the level of the first costal cartilage. On the left dullness may extend far beyond the nipple, even into the axilla. Thus we have a huge triangle whose upper angle is rounded off, and of whose sides the right approaches a perpendicular much more nearly than the left. Only a small portion of the triangle is absolutely flat, exceeding in size the normal area of absolute flatness in proportion to the amount of effusion. The remainder of the area is only relatively dull, and consists of two zones, an inner, being next to the area of absolute flatness and corresponding to the normal præcordial area, and an outer, over which resonance is better, corresponding to the distended pericardium beyond. The apex may be displaced upward and a little to the left, but the apex beat will never be found strongest at or near the outer limit of the dull area, as it always is in cases of ventricular enlargement, nor will the resonance just beneath the apex be tympanitic.

In cases of small effusion the increase of dullness will be noticed chiefly above and to the left. In extensive effusion we expect to find the surrounding lung slightly dull or tympanitic.

Dismissing affections of the heart and pericardium, those of the neighboring tissues will now be briefly considered in their relation to the præcordia. In left-sided pneumonia, it is unnecessary to say, that percussion affords but little evidence as to the extent of the præcordia toward the left; it may, however, be estimated in a pneumonia of the lower lobe by observing the point at which the hypothenuse of the præcordial area meets the upper limit of infiltration.

In extensive effusions into the pleural cavities the altered position of the heart affords an indication of especial value, inferior to no other physical sign to be obtained in this disease. This altered position may be shown either by the site of the apex beat or by percussion. It is in left-sided effusions that the displacement chiefly occurs, but it is also frequently found with large effusions upon the right. Here the whole mediastinum is pushed to the left, the heart and great vessels being driven bodily before it. The præcordia is therefore simply displaced to the left, with no twisting of the great vessels. In the most marked case of this kind seen by the writer the right border of the præcordia was found six centimetres to the left of the median line, and the apex correspondingly carried to the left with no downward displacement. In extreme cases the apex is said to be carried outward as far as the axillary line.

In left-sided effusions the mechanism of displacement is more complicated, and the various alterations in the position of the heart more difficult of explanation. Here, too, the heart vessels and mediastinum may be pushed *en masse* to the right. Such are cases in which, while there is dullness for a little distance to the right of the sternum, between the third and sixth ribs, the apex is unmistakably situated in the fourth or fifth interspace, near the left border of the sternum, as shown by palpation and auscultation. In other cases we find an area of dullness on the right, corresponding very nearly with that normally found on the left, with the apex beat also in a corresponding situation beneath the right nipple. Here the heart has evidently moved through a semicircle upon its mediastinal attachment as an axis. In still other cases we find the sounds and impulse of the apex most distinct beneath the lower end of the sternum, but no perceptible dullness beyond its right border. It seems difficult to explain such a condition unless we suppose that the heart has rotated through a quadrant only instead of a semicircle, thus bringing its smallest possible diameter in relation with the chest wall, and its apex beneath the sternum.

Emphysema of the lungs remains to be spoken of in its relation to percussion of the heart. By diminishing the negative pressure normally exerted by the lungs it may cause permanent depression of the diaphragm, and a consequent downward displacement of the heart. Thus the upper limit of the præcordia may be lowered to the level of the fourth costal cartilage or even beyond. Again, this affection may wholly obliterate the area of absolute flatness, which is then replaced by fair pulmonary resonance with a somewhat tympanitic quality. In most cases, however, the limit of relative dullness above and to the left may still be defined by careful percussion, and if this gives unsatisfactory results we must rely upon the position of the apex beat to establish the size of the heart. Emphysema is a condition always to be borne in mind in percussion of the heart, and carefully sought for elsewhere whenever there is any suspicion of its existence.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY M. H. RICHARDSON, M. D., SECRETARY.

DISCUSSION CONCERNING SIPHONAGE OF TRAPS IN WASTE PIPES.

January 16, 1882. Dr. C. F. Folsom spoke of the case of a young lady who was obliged to keep her rooms a great part of twenty-four hours, and whose health was thought to be affected by her confinement more than this cause would seem to warrant. On entering her room there was no odor perceptible, though it seemed a little close. The plumbing was said to be faultless. On investigating it the trap of the waste pipe was found to be the ordinary kind, and a long flow of water acted as a siphon and emptied it altogether. That fact was indicated by a peculiar noise, which is always heard when siphoning takes place. The plumber had been puzzled to know what to do. The only efficient thing was to make a vent in the pipe to communicate with the external air. The plumber, however, having made the vent carried the pipe up but a short distance, so that the same conditions existed as before. The sitting room was trapped in the same way, yet was not so bad. It had the same trap, which was, of course, useless. Finally, a large box trap of three quarts capacity was put in. From this there was a straight fall of thirty to forty feet.

The same noise was made as before, and the same ineffectual remedy tried. In both cases the vent opened directly into the room, but concealed under the washbowl slab.

Dr. Reynolds asked whether the air of a room can be poisoned by exhalations coming from that part of the waste pipe situated between the sink and its box trap. That is to say if a waste pipe exists during four or five years doing its work well, is there any possibility of that being the cause of foul air in the room. Plumbers say that nothing smells worse than an old waste pipe. He would like to ask if that is a fact.

Dr. Folsom replied that it was so in many cases. He had seen a thick deposit in the waste pipes to which there was a certain amount of odor. At the Sherborn Prison two cases of puerperal septicæmia gave rise to an investigation, and two or three pipes were found to be in a very bad state.

Dr. Reynolds said he had known of cases where the traps were cleansed at intervals just as cesspools are, and he thought that to be the intention of the plumber.

Dr. Folsom said that under all circumstances such a condition of things is objectionable.

Dr. F. H. Brown said that sometimes even water traps are inoperative. It is a well-known fact that water under pressure will absorb gases and give them off under less pressure above. That is one of the reasons why it is noticed in sleeping rooms. Something more than the simple water trap must be tried. We shall have to come to the ball trap or some trap like that of Colonel Waring's, of Newport.

Dr. Folsom said that the best way to be certain of cutting off all communication between the room and the sewer is to have a thoroughly ventilated S-trap or a block-tin pail under the washbowl to take the place of the waste pipe.

Dr. Durgin said that it had been forgotten that waste pipes will not keep themselves clean without work. Being inaccessible the accumulated filth remains, and the inside of the waste pipe becomes thick with it. It is not common to find less than five to six feet of waste pipe between the bowl and the trap, which is enough to give out an odor. Dr. Durgin had found this condition of things existing in his own house. He cleansed the pipes by using first boiling hot water for several minutes, and then a solution of potash or copperas. With regard to the kind of trap to be used, any that allows free flow of water through it, and at the same time furnishes a good water seal. Box traps offer greater resistance against siphoning; but they are in reality cess-pools, and give offensive odors into the rooms. They are much more objectionable than the S-traps, which clean themselves. The S-trap has a little cup at the bottom that can be unscrewed. They should not be used without venting pipe upon the distal end.

In reply to Dr. C. P. Putnam, Dr. Durgin said that it is important that the soil pipe should go through to the roof of the house as well as the ventilation pipe.

With regard to the water closet there must be the same method of ventilation as in the traps already spoken of.

In reponse to Dr. Reynolds Dr. Folsom described the various kinds of water closets now in use.

DR. McCOLLOM read the regular paper on the

USE OF THE OBSTETRIC FORCEPS.[1]

DR. REYNOLDS said this was a very interesting series of cases. The conclusions of the writer are in accord with the best writers of the present time. There is less risk with forceps than without them if the best instruments are used.

Recent Literature.

Practical Medical Anatomy: A Guide to the Physician in the Study of the Relations of the Viscera to each other in Health and Disease, and in the Diagnosis of the Medical and Surgical Conditions of the Anatomical Structures of the Head and Trunk. By AMBROSE L. RANNEY, A. M., M. D. New York: William Wood & Co. 1882.

This is a work of what may be called applied anatomy. The author, in common with modern teachers of anatomy, feels that students demand more and more to know the use of the knowledge they are called upon to acquire. Simple descriptive anatomy, as it is usually taught, reminds most students of their early trials with the multiplication table. In both cases they are assured of the great utility of their studies, but they have to trust to the future to make the promise good, and in the mean time learn dry facts apparently without rhyme or reason. The reviewer has often regretted that he was not made when young to grasp the idea that the science of mathematics is something more than a collection of puzzles apparently contrived to worry the student, and many physicians doubtless wish that the practical importance of anatomy had been made apparent to them when they began its study.

Dr. Ranney's work, then, is one of the class we should welcome. It remains to consider how he has accomplished his task. As far as anatomical facts go it is little more than a compilation, but it has been cleverly done, and there are many practical deductions that are both interesting and valuable. The great defect, in our opinion, is an excess of what may be called "padding." Thus there are many wood-cuts of deformities, congenital and acquired, and of tumors which have but a very slight connection with the text. We are even inclined to smile at one of a doctor in a dressing-gown examining the ear of a patient who has a very pensive look, as if he were wondering what it would cost. The discussion of the differential diagnosis of apoplexy and embolism seems to us out of place.

There are several anatomical points that call for criticism. Nothing is said of the two temporal ridges, and in a figure of the skull on page 2, a line which is clearly the superior ridge is spoken of as the line of origin of the temporal muscle. Dr. Ranney has modified the line proposed by Broca, running from the alveolar border of the upper jaw to the occipital condyle, which serves as a basis for several other lines, by drawing it to the tip of the mastoid process instead of to the condyle, because the latter cannot be felt during life. It seems to us that the mastoid process is rather too liable to variation to be quite satisfactory, though it certainly is desirable to have a line running to points that can be felt. There would, we think, be less inaccuracy in assuming that the upper border of the zygoma is horizontal when the head is in its normal position. The action of the sterno-mastoid is said to be to move the head forward, and this statement is made just after one that in extreme dyspnœa the head is thrown backwards. Now in this state the muscles in question are very tense, and they throw the head backward because they are attached behind the axis on which it bends. The lingual triangle is described as being bounded by the greater horn of the hyoid below, the digastric above, and the external carotid externally. This no doubt is a triangle in which the artery can be tied, but it is not what we have thought was universally known as the "lingual triangle."

The author gives a great deal of attention to landmarks, and this part of the work is very useful. It seems rather unnecessary, however, in enumerating the structures opposite the third cervical vertebra, for instance, to count as (2) the bifurcation of the carotid artery, and as (3) the point of origin of the external and internal carotids, and at another point to count both the lower end of the pharynx and the upper end of the œsophagus, the lower end of the larynx and the beginning of the trachea.

The topography of the chest is very good, and will be very acceptable to the student to whom the position of the heart and its valves is often a stumbling block. We cannot believe that the sternal end of the second rib is as high as the third dorsal vertebra, and we are sorry to see a wood-cut (after Gray), according to which the aorta and pulmonary artery appear to arise side by side. There are two excellent figures after Luscka showing the position of the abdominal organs before and behind. We are glad to meet the frank statement that the author has never been sure that he could feel the outline of the kidneys, even under the most favorable conditions, provided their size and position were normal. Our experience is the same. The umbilicus is said to be placed slightly above the centre of the height of the individual, which is inaccurate, for the centre is nearer the pubes, and in tall men may be even below it.

Dr. Ranney devotes a chapter to the human face in health and disease, which has a good deal in it which is comparatively little known. He believes that the lines of the face and the expression as aids to diagnosis do not receive now a days the attention they deserve. We have no desire to dispute this, though a good many of the statements which he quotes seem to us decidedly fanciful. We could wish that the strictly anatomical relations of these lines had been rather more thoroughly worked out.

There is much to praise in the book in spite of the defects we have alluded to. It can be read with profit by the teacher of anatomy, and will teach the student that the practical applications of anatomy are far greater than he probably had imagned. T. D.

Transactions of the American Gynecological Society. Vol. VI. For the Year 1881. Philadelphia: Henry C. Lea's Son & Co. 1882.

This ever welcome and exceedingly valuable addition to our gynæcological literature comes this year earlier than usual. Its contents show the same high excellence as in former years, and are an indication of the interest the members of the Society feel in its prosperity. It is emphatically good work that forms the basis of the papers read, and it would be rare to find an equal number of noteworthy contributions in the yearly Transactions of any similar society.

---

[1] See page 266 of this number of the JOURNAL.

Following the annual address of the president, Dr. W. H. Byford, of Chicago, is a paper by Dr. S. C. Busey, of Washington, entitled Acute Hyperæsthesia of the Peritonæum, either Circumscribed or Diffused, following Minor Gynæcological Operations and Manipulations. As the clinical features of the affection under consideration are very familiar there was little discussion of them, but the pathology called forth considerable difference of opinion. Whether to consider these alarming but transient symptoms the initial stage of an inflammatory process, or pure neuralgia, was the point about which the discussion chiefly centred. In the absence of opportunities for post-mortem examinations this point must remain to a great degree theoretical. The paper is of value as calling renewed attention to the marked symptoms which may be produced by the slightest manipulation of the organs of the pelvis, and the necessity of extreme caution on the part of the practitioner.

The paper by Dr. H. J. Garrigues, of New York, on Exploratory Puncture of the Abdomen, is of exceeding scientific interest as well as great practical value. It gives the result of the very careful examination of fluids obtained in ninety-four cases of various affections, principally cysts of the ovary, and conditions liable to be confounded with it, with regard to their physical, chemical, and microscopical characteristics. The results arrived at by the author are, that exploratory puncture should be employed in every case before a more dangerous operation is undertaken; that there is no pathognomonic morphological element in the fluid of ovarian cysts, but that by paying attention to all the different characters, physical, chemical, and microscopical, it is in most cases possible to tell with certainty whether a given fluid comes from an ovarian cyst or not. Dr. Garrigues thus denies the special significance of the so-called Drysdale corpuscles, and says they are the nuclei of epithelial cells which have undergone colloid degeneration, and are found not only in cysts of other origin than ovarian, but in fluids not taken from any kind of cyst. The discussion did not throw much light on the pathological questions involved, but Dr. Drysdale promised to prepare a paper in reply to that of Dr. Garrigues for the next meeting of the Society. The general sentiment of the Society was, however, decidedly against exploratory puncture as recommended by the author, it being considered not only unnecessary in the majority of cases, but at times dangerous in itself and increasing the danger of a subsequent operation.

Dr. G. H. Lyman, of Boston, in a paper entitled Notes of Cases of Pelvic Effusion Resulting in Abscess, after some general observations on the pathology of pelvic cellulitis and peritonitis, gives the histories of forty-one cases occurring in five years at the Boston City Hospital. One noticeable feature of many of them is the marked relief and rapid recovery following the aspiration of a very small amount of pus. Dr. Lyman justly emphasizes the importance of giving early exit to pus per vaginam, thus anticipating an attempt at spontaneous evacuation through some other channel. The point urged by Dr. Smith in the discussion, as to the danger of using the sound in making a differential diagnosis between retroversion and pelvic effusion, seems to us well taken.

The paper by Dr. Nathan Bozeman, of New York, entitled Genital Renovation by Kolpostenotomy and Kolpoecpetasis in Urinary and Fæcal Fistules, is the first part of an elaborate treatise, overloaded with strange polysyllabic words of Greek derivation, the aim of which is to show that genital kleisis, or operations to occlude or impair the vulvo-vaginal and uterine tract, by interference with its functions, are dangerous as regards their remote consequences, and that the lesions can by skill and patience on the part of the surgeon be cured by genital anakainosis, the consideration of which the author reserves for a subsequent communication.

Dr. Ely Van de Warker, of Syracuse, contributed a paper entitled Forcible Elongation of Pelvic Adhesions. Two facts were brought out prominently by the animated discussion which followed: one that before any real advance can be made in the treatment of these difficult cases some more definite idea of their pathology must be gained, and the other that the Society almost universally condemned the mode of treatment proposed by Dr. Van de Warker. Various plans of treatment were advocated by different members, mostly by means of pessaries, all of which claimed great patience as a prerequisite, and promised only a moderate degree of success. Dr. Bozeman spoke of a method which more nearly corresponds to that we have found the most successful, namely, systematic tamponing of the vagina with cotton soaked in glycerine, thus keeping the adhesions on the stretch and favoring their gradual absorption. A promising field of investigation is open to research in determining the pathology of the adhesions in these cases, their character, extent, and frequency. The difficulty of discussing such a question in the present state of our knowledge is shown by the fact that while Dr. Chadwick says that in about five thousand cases he had had seven or eight hundred of pelvic effusion, in many of which the uterus was more or less fixed, Dr. Sims has seen only twenty cases in his entire practice, and Dr. Goodell not more than ten. It is evident that very different ideas of the true nature of such adhesions must prevail.

A short paper by Dr. T. G. Thomas, of New York, emphasizes a rare but important complication in the removal of abdominal tumors, namely, the expansion of the bladder over the growths to such an extent, and so firmly, as to render their removal impossible without wounding that viscus. The mortality in the eight cases which Dr. Thomas has found was very great; early recognition of the complication, however, may suggest methods of dealing with it during the operation, and modifications of after-treatment which will make it less serious.

A paper on Fibroid Polypus, with Inversion of the Uterus, by Dr. T. A. Reamy, of Cincinnati, gives the history of a case where, in spite of all care in the diagnosis, the removal of a portion of the uterus by the écraseur was only prevented by the failure of the chain to work. The tumor was then removed piecemeal with vulsellum and scissors. In our opinion the écraseur or the galvano-cautery wire should never be used in such cases; and when it is remembered that, as Dr. Mary Putnam Jacobi pointed out in the discussion, the blood-vessels are all on the surface of the tumor, and that steady traction with the vulsellum will render the danger of hæmorrhage almost null, the objection to cutting the tumor into small enough pieces to be easily removed falls to the ground, and so serious a procedure as incising the perinæum for the sake of delivering the tumor whole need not be resorted to.

Dr. Albert H. Smith's paper on Axis Traction with the Obstetric Forceps advocated no new principle, but attempted to show that the peculiar advantages claimed for Tarnier's forceps and its various improved successors could be obtained quite as well with the ordinary forceps if used after the manner first spoken of by Osiander early in this century, and subsequently by various other writers, and called attention to several objections to Tarnier's forceps. The discussion naturally turned on the merits of the forceps in question, and disclosed a very marked unanimity in its favor. It was fully recognized that its field of application is limited, namely, at or above the pelvic brim; but for this class of cases nothing has yet been advised which is so satisfactory.

Dr. A. D. Sinclair, of Boston, continues his investigations of the Measurement of the Uterine Cavity in Childbed, and gives the results of a second and third series of one hundred and eight cases each. As the author is waiting until the completion of one thousand cases before drawing any conclusions, any extended criticism here would be out of place. One fact is, however, very noticeable. Dividing the second series into two groups of fifty-four each, the larger proportion of measurements under three inches falls within the first half. Thus in the first fifty-four cases there are only six where the depth is over three inches; in the last fifty-four there are only three cases where it is under three inches. So of the third series there are only seven cases in the whole one hundred and eight where the measurement is under three inches. That is to say, in the first half of the second series there are nearly five times as many short measurements as in all the rest of both series. If the cases are tabulated as they occurred in chronological order it is certainly extraordinary that so many short measurements should have fallen together. No solution is apparent from an examination of the cases as given in the tables, and one is forced to imagine that the difference may lie in the fact that the smaller measurements were obtained by one of the observers, and the larger by the other. If this were so the deductions drawn from the whole series would not be so satisfactory, for to form correct conclusions one must be sure of one's data. There may be an explanation, however, which is not evident from the tables.

Dr. W. M. Polk, of New York, read a paper entitled Can Lacerations of the Cervix Uteri be Prevented? The author states a number of causes, and thinks that most of the lacerations are avoidable. While recognizing the value of directing the attention of obstetricians to the possibility of the occurrence of this lesion from the causes enumerated, yet the author seems to us too sanguine in his expectations. Just as the perinæum, though the object of solicitude since the beginning of medicine, is not infrequently ruptured, so lacerations of the cervix uteri are sure to occur. We are, in fact, much more powerless to prevent them than ruptures of the perinæum.

A paper on The Mechanical Action of Pessaries, by Dr. F. P. Foster, of New York, speaks of the action of pessaries as of three kinds: (1) by lateral distention of the vagina; (2) by pressure transmitted directly to the body of the uterus; and (3) by pressure on the vaginal walls, dragging the cervix in one direction and causing the body to move in the opposite direction. The object of the paper is to show that in the majority of versions the action of pessaries is of the third variety. While this may be a slight factor in some cases, especially of anteversion, yet in the majority of malpositions of this kind no such effect is produced. In cases of retroversion, if the pessary is properly curved, it follows the normal curve of the vagina and impinges on the body of the uterus at the junction of the vagina with the cervix. There is no appreciable stretching of the vaginal wall to pull the cervix back, and the body is kept forward by the lever action of the pessary. The pressure on the body of the uterus need not be great when once the organ has been replaced; this is shown by the futility of attempting to restore the uterus to its normal position by the pessary. Where the malposition has been corrected by digital or other means, then the action of the pessary comes in to keep it in position.

The pessary for the majority of cases of retroversion need not be curved so much as to render its introduction difficult (an objection which our author urges). Nor does a properly constructed pessary penetrate "into the space between the utero-sacral ligaments." The pessary should be as broad as the vagina will comfortably allow, or the uterus will tend to fall to one side or the other.

The fundamental error seems to us to be that the author expects the pessary to *restore* a retroverted uterus to its normal position, whereas its proper function is merely to keep the already restored uterus from returning to its retroversion. With anteversion the case is different. Anteversion being merely an exaggeration of what is the normal position of the organ, a very slight modification is all that is necessary, and this is accomplished probably quite as much by traction on the anterior vaginal wall as by direct pressure on the body of the uterus.

Other papers were contributed by members of the Society, which need not be noticed in detail. Taken as a whole, the present volume compares very favorably with its predecessors, and will do much to sustain the high rank which America holds in this department.

On the Morbid Conditions of the Urine Dependent upon Derangements of Digestion. By Charles Henry Ralfe, M. D. London: J. & A. Churchill. 1882.

This small volume (150 pages, 8vo) is devoted to a consideration of those chemical changes occurring within the body, as distinct from those morbid conditions of the urine which are directly associated with disease of the renal organs or of the genito-urinary passages, or those which, like diabetes and temporary albuminuria, are the result of disturbance of the circulation in the hepatic and renal vessels.

It is with the aid of the late marked advances in physiological chemistry that the writer reviews the facts connected with the subject of the morbid conditions of the urine dependent on derangements of digestion.

Six chapters and an appendix treat of the formation and removal of acid from the body; dyspepsia, associated with an acid condition of the urine, and with an alkaline condition of the same; relationship of uric acid to lithæmia and gout; derangements associated with deposits of oxalate of lime and with excessive elimination of phosphoric acid, the effect of bicarbonate of potash on the acidity of the urine.

The contents of this book have appeared at various times as articles in the *Lancet.*

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 21, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

GUITEAU'S BRAIN.

ONE of the most accomplished cerebral pathologists in this country, Dr. Spitzka, of New York, has expressed the opinion that the asymmetry of Guiteau's brain, as shown by post-mortem examination, is sufficient to justify the diagnosis of congenital insanity, the *primäre Verrücktheit* of German authorities. In this opinion we are unable to concur, but it seems clear that the asymmetry, taken in connection with the great thinness of the cortex of parts of the anterior portion of the brain, which was unaccompanied by any excess of fluid in the ventricles or elsewhere, had some value as corroborative evidence of hereditary insanity, and marks a brain which was from infancy or some early age incapable of normal development.

The adhesions of the arachnoid, we are informed by Dr. Godding, who was present at the autopsy, were less than we had supposed, being confined to the immediate neighborhood of the longitudinal sinus; but the milky opacity of the arachnoid was observed to be somewhat unevenly distributed throughout the anterior and antero-lateral portions of the brain. In the absence of chronic alcoholism, sunstroke, malarial fevers, etc., we do not see any other so reasonable explanation of this condition as that it was probably in part the cause, and partly the result, of several periods of cerebral excitement.

In the pathological conditions shown in the blood-vessels, the perivascular lymph spaces, the neuroglia, and the cells, with little, if any, evidence of atrophy, and with the anatomical elements for the most part preserved, we can see only indications of recent disease, if we interpret the report of the autopsy correctly. The *Medical News*, which maintained Guiteau's sanity during life, and affirms his responsibility now, acknowledges that the microscopic examination revealed changes in Guiteau's brain which "constitute the initial stage of a malady, which, in its fullest development, is known as dementia paralytica or an allied disease, the early symptoms of which disorder correspond closely with the mental condition of Guiteau during the past year."

Could there be any more humiliating record to add to the story of the trial?

We were unable, before Guiteau's death, to give to our readers the results of a clinical examination made under such circumstances as to render an absolute differential diagnosis possible. We should be glad if the autopsy had been more minute and thorough. As it stands, however, it leaves to those who testified that Guiteau was "perfectly sane," and to the many more who thought that he was "only a crank," a difficulty of explaining their position from which we can see no possible satisfactory extrication.

We would suggest, as a diagnosis in this case, hereditary insanity, manifested in early life or congenital, and attended with such symptoms as are grouped under the unsatisfactory term moral insanity, to which were added the periods of excitement somewhat resembling mild mania common in that disease, and finally ending in the initial stage of general paralysis of the insane, in which distinct motor symptoms or general dementia would not be found. Such a case is not common, but one has been reported by Christian. Those symptoms of Guiteau's, too, which are extremely rare in even the early stage of general paralysis, have been observed in two cases reported in the *American Law Review* for February, 1882. In the first, a gentleman of high character and good standing, with a respected and loved wife, while away from home married a pretty girl beneath his station. The crime was so inconsistent with his character that he was placed in an insane asylum for observation before trial, where he was kept *secluded at rest* for a couple of months, and then declared sane, simply because the asylum physicians were not familiar with the perversion of character and slight intellectual impairment so common in the early stages of the disease. The man was sentenced to fifteen years' confinement in the State prison; but he showed unmistakable evidence of his disorder as soon as he arrived there and *attempted to work.* Later, he was sent to the insane asylum a complete mental and physical wreck. The second case was that of a very brilliant young lawyer, elected mayor of his city two years in succession, where there was *mild cerebral stimulation* similar to that produced by coffee or wine, but constant, in the early stage of the disease, the moral perversion showing itself in little acts of frequent occurrence which soon made his many friends enemies. The first striking misdeed committed by him was to engage to speak in one city in a Republican campaign meeting, he being president of the local Republican committee, and then to go to another city the same evening, breaking his first engagement, and addressing the opposition with fierce denunciation of his own party. Even then he was not thought to be insane. The natural course of the disease followed through mental decay to death.

We are familiar with two cases of general paralysis of the insane where the capacity to attend to the usual duties was so slightly diminished in the second year of the disease, that the business of either (law and trade) did not suffer at all, and their insanity was not then suspected.

After such a trial of such a man hanging was probably the best public policy; but we still maintain that it would have been better public policy to send him to a lunatic hospital for life without trial. It would have been useless to condemn him to hard labor, as has been suggested, because he was incapable of steady application of any kind.

"CYCLING."

AN interesting and instructive lecture on "cycling"[1] was recently delivered before the Balloon Society of London by Mr. A. Wynter Blyth, medical officer of health and public analyst for Marylebone.

Mr. Blyth finds the first application of mechanism set in motion by the feet or hands was to four-wheeled carriages, of which there is an illustration in the *London Magazine* for August, 1769, showing a true velocipede. In the early part of this century a machine of French origin appeared in England, and in this country too, called first a "dandy horse," and afterwards a "hobby horse." Two wheels of equal size, one in front of the other, connected by a wooden bar, upon which the rider sat, propelling himself with alternate feet upon the ground, and steering by means of the front wheel; this constituted the "dandy horse," of which Mr. Blyth found twenty-five caricature prints in the British Museum bearing date between 1819 and 1821.

At the exposition of 1862 a machine made of wood was exhibited, having two wheels, and pedals on the front one, though attracting little attention. Since 1868 iron and steel have been substituted for wood, the spider wheel has been invented, India rubber has been applied to the tyre, "and ball-bearings to the wheel, combined with almost perfect springs, have reduced friction and vibration to a minimum."

The argument that cycling could not be made a saving of labor, for the reason that the rider would have to move the weight of the machine in addition to his own, has been proved erroneous. In explanation Mr. Blyth defines the difference between walking and cycling as follows: —

"When we stand or walk the weight of our bodies presses on the ground, representing a force which in no way aids progression. It is lost; but on the wheel this force is utilized. The difference between walking and cycling is then as follows: Walking is wholly muscular exertion; cycling is one third muscular force, two thirds weight force or gravity. The cyclist alternately puts his weight first on one pedal and then on the other, and the chief part of the muscular force used is not used in directly rotating the pedals, but in this shifting of the weight of his body. A long walk tires the ankle-joints, the knees, and the hips; in part from the very weight they have to support, and this weight, so long as we walk, is continuous, but in cycling it is discontinuous. In cycling the main stress is on the muscles in front of the thigh; in walking the calves and the muscles moving the feet are among the first to get weary, but so little is this latter the case on the wheel that a rider, after a long and sustained effort, often feels quite up to any reasonable amount of walking."

Tricycles, which are beginning to make their occasional appearance upon our roads, are less dangerous and more comfortable than bicycles; they offer a less independent though more sociable mode of traveling, and whilst permitting the transportation of a small amount of luggage, are themselves inconvenient things to store. This last the lecturer considers a serious inconvenience, for in his enthusiasm he believes in the near future, "without doubt, each morning will be seen some twenty or thirty thousand cyclists coming towards their business in commercial centres, and if each of them are to ride tricycles the matter of storage might be difficult, without considering the yearly rent for warehouse room; but a bycycle can stand in a passage, in an office, an area, or almost anywhere, and, lastly, not the least advantage is the greater readiness, in case of injury to the rider or the machine, that the bicycle and rider may be conveyed by any light carriage to his home or a railway station."

The bicycle can be driven faster than the tricycle it is true, but a very good rate of speed may be attained and kept up on the latter, one gentleman having made one hundred and fifty-four miles over the road in twenty-two hours, and another one hundred and eighty miles, also over the road, within twenty-four hours. With the bicycle two hundred and twenty-two miles have been made in the twenty-four hours. The best tricycles now steer with the front wheel, and the labor of movement is minimized by division. One machine is manufactured with three wheels, which will carry four people, each person driving only three quarters of a wheel.

The great boon of cycling, Mr. Blyth thinks, "is its value to the working man in the extension of his residential area. Let the working man save his money and buy a bicycle. A radius of ten to fifteen miles is then open to him, and if he has to get up an hour earlier in the morning, and to come home an hour later in the evening, the benefits of purer air, cheaper and better accommodation for himself and family, will in the long run more than repay. Any cheap means of locomotion, which has a tendency to make home healthier by relieving the pressure that has hitherto herded men and women together like penned-up animals, should receive the hearty support of the hygienist, the philanthropist, and the legislature."

In regard to the best food for the cyclist, he says: "I have studied the diets recorded as in use, and find that those who have done long journeys successfully have used that class of diet which science has shown most suitable for muscular exertion, namely, one of a highly nitrogenized character, plenty of meat, eggs, and milk, with bread, but not much butter, and no alcohol. I have cycled for over fifty miles, taking frequent draughts of beer, and under these circumstances, although there has been no alcoholic effect, it has caused great physical depression. The experience of others is the same. However much it may stimulate for a little while a period of well-marked depression follows. I attribute this in part to the salts of potash which some beers contain, in part to injurious bitters, and in part to the alcohol. My own experience as to the best drink when on the road is most decidedly in favor of tea. Tea appears to rouse both the nervous and muscular system with, so far as I can discover, no after-depressing effects."

Mr. Blyth is evidently a great enthusiast, and must have come fully up to the present requirements of his audience. Here are the possibilities, some of which are probabilities, of the "wheel's" revolution in locomotion: "Steam tricycles, electric bicycles; the whole metropolis paved with wood or asphalt; the great main roads of the country reconstructed with a special reference to the cyclists' requirements; the rise again of the old coaching inns under the name of cycling hotels."

---

[1] Sanitary Record, August 15th

As a missionary, on the other hand, the "wheel" is a temperance organ, alcoholic excess being fatal to long rides; and, more surely than "tracts," it abolishes the groups of idle young men standing on holidays at the corners of the streets; "the pent-up passions, formerly bent on mischief, now evaporate with copious perspiration in road and lane."

Until the Balloon Society can develop aerial traveling, the day of the musing pedestrian is evidently nearly done, if Mr. Blyth's anticipations realize themselves, for even though content to walk when others fly the charm of the surroundings will be gone.

We almost wish we were justified in pleading that cycling is unhealthy, not unhealthy enough to abolish, but only enough so to check it. Will not the future generation of males be a prey to the disease of the Scythians? In any case some use and some spot, we must believe, will be found for walking, which has been in vogue so many generations!

◆

"THREATENED WITH TYPHOID."

AGAIN the season of the year has come when we hear much of individuals who are "threatened with" typhoid. That such an expression should be used by the non-professional public is not perhaps to be wondered at in view of the tenets of popular pathology. But it would be interesting to know precisely what mental picture is present in the mind of the physician who employs the expression. When Wolseley threatens Arabi, or when the congressional assessors threaten the office-holder whose spontaneity is too slow, we get a distinct idea of the word as implying a *conditional menace.* But when a given patient presents a certain well-known group of symptoms and the medical attendant says he is threatened with typhoid, who is the threatener, and what are the conditions upon which the evil may be averted? Undoubtedly a time exists prior to the inception of a disease, when the *materies morbi* is brought into such a relation to the individual that the figurative mind might speak of it as "threatening" him, the condition of his attack being that he be in such a place and such a state as to afford a favorable *nidus* to these germs. But at the time our medical man sees him the case is different. He has or has not received the disease; he has or has not typhoid. The threat has been carried into execution, or else the patient by his own act (as fortunate as unconscious) has so avoided the condition as to escape. To the physician who has substituted a "threatened" diagnosis for the lack of certain knowledge we must suppose that there is present in the imagination something like hordes of rabid germs or serried ranks of truculent bacteria which are at that moment gnashing their teeth and preparing to seize upon the patient's vitals *unless* they can be vanquished and put to flight by medical skill. While presumably the fever, headache, etc., are due to the trepidation caused in the organism by the menacing attitude of the bacteria and the fear lest the doctor may not get the better of them. By all means, gentlemen, if you wish to be a little mystical, continue your minatory theory. But advance it at the proper time in the history of the case. Tell the young man just the time *when* he is threatened with delirium tremens or lues venerea. Then we shall understand you. And if you go even a step further in the use of the term, we shall know that the boy who is threatened with tetanus has only bought a toy pistol, and the man who is threatened with concussion of the spine has only taken a ticket on the —— and —— railroad.

◆

MEDICAL NOTES.

— It is claimed by a number of recent writers upon public health that the wooden-block pavements in use in many cities have a markedly unhealthful influence. The nature of the evil seems to be two fold: first, that the blocks being placed with their fibrous ends upward are saturated through by every rain, and retain their dampness for a long time, for the reason that all evaporation must take place from their upper surface, as the lower often rests upon boards or some still more water-proof foundation. In this way there is constantly present a large damp surface which could hardly be better planned for retaining its moisture, and which constitutes an artificial but pretty effective malaria-breeder. Such pavements on being taken up very frequently exhibit a white fungous growth upon their lower and lateral surfaces. In the second place, these disadvantages are added to by the fact that it is not simply with water that these blocks are saturated, but with an infusion of animal excrement. This, of course, undergoes putrefactive change, and in wet weather the effect is of a layer of rotting barn-yard manure, while in dry weather the particles of dust fill the atmosphere, and irritate every tissue with which they come in contact.

— In May last a person suffering from small-pox presented himself in the out-patient department of Guy's Hospital, and was dismissed by the medical officer in charge with advice to apply for admission to a small-pox hospital in the usual way, through the intervention of the parish authorities. The officers of the hospital did not further concern themselves about the patient, who, as it subsequently appeared, rode to his destination in an omnibus. An investigation of the matter was made, and the committee reported a resolution "that at every general hospital there should be provided an isolation room, in which should be temporarily detained persons suffering from infectious disease until such time as they could be removed in an ambulance to one of the hospitals provided for their reception and treatment; that the difficulties attending the removal of such patients would be greatly diminished were the simple certificate of a medical officer of the hospital at which the person might have applied in the first instance sufficient to insure admission into one of the infectious hospitals under the control of the managers."

Censure of the action of the hospital authorities in this matter was expressed by the mover of the resolution, and it was claimed that they were liable to penalties under the sanitary acts as accessory to the exposure of an infectious patient. This should be of interest with reference to the immediate disposition of such cases at our own hospitals.

— It would be difficult to find an instance of more rapid operating than the following achievement of Hasuer, the oculist of Prague, which is vouched for by a correspondent in the *Chicago Medical Journal and Examiner:* "The 16th of May is the day allotted in the calendar to St. John Nepomuck, the patron saint of Bohemia. On this day the halt, the maim, and the blind come in from all the surrounding country for treatment. Among this motley crowd are a great many cataract cases, and on one of these occasions, having his patients all made ready, Hasuer is known to have operated on *twenty-three eyes in one hour.*"

— The following are the prize questions of the Académie de Médecine proposed for 1883: (1.) The Academy Prize of 1000 francs, To Determine the Clinical Value of Antiseptic Procedures in Surgical Practice. (2.) The Portal Prize of 1000 francs, Is Tubercle of a Parasitic Nature? (3.) The Bernard de Civrieux Prize of 2000 francs, Hysterical Paralyses and Contractions. (4.) The Capuron Prize of 2000 francs, The Influence of Sea-bathing on the Scrofula of Children. (5.) The Barbier Prize of 2000 francs, to be awarded to whoever nearest attains to the Cure of Diseases hitherto reputed as Incurable — namely, hydrophobia, cancer, epilepsy, typhus, scrofula, and cholera. (6.) The Godard Prize of 2000 francs will be given for the best work on External Pathology. (7.) The Desportes Prize of 1500 francs, to be given to the author of the best work on Practical Medical Therapeutics. (8.) The Buignet Prize of 1500 francs, to be awarded to the author of the best work, whether manuscript or printed, on the Applications of Physics or Chemistry to the Medical Sciences (the works of foreigners and translators cannot compete for this prize). (9.) The Daudet Prize of 1500 francs, Lymphadenoma. (10.) A prize of 2000 francs on the Hygiene of Infancy — "Exhibit by precise observations the part which the First Dentition may play in Infantile Pathology." (11.) The Vernois Prize of 800 francs will be annually decreed for the best work on Hygiene. (12.) The Amussat Prize of 2000 francs, to be awarded to the author of the best work or researches, founded both on anatomy and experiment, which shall realize or prepare the way for important progress in Surgical Therapeutics. (13.) The Stanski Biennial Prize of 1000 francs, to be awarded to whoever best demonstrates The Existence or Non-existence of Miasmatic Contagion by Infection or Contagion at a Distance. (14.) The Huguier Prize of 3000 francs, to be given to the author of the best work, whether manuscript or printed in France, on the Diseases of Women and their Surgical Treatment. (15.) The Saint-Lager Prize, a sum of 1500 francs, to be given to compensate the experimenter who has been able to induce a Tumor of the Thyroid Gland by the administration to animals of substances extracted from the waters or soils of countries in which Endemic Goitre prevails. (16.) The Saint-Paul Prize of 25,000 francs will be conferred upon the person, without distinction of country or profession, who first discovers a remedy which the Academy acknowledges is efficacious and sovereign in Diphtheria. Awaiting the discovery of such remedy, the interest of the sum awarded will be expended every second year in "encouragements" for those whose researches on diphtheria appear to be meritorious.

— It is reported, on the authority of an anti-vaccination correspondent in the Boston *Journal*, that a statute for compulsory vaccination, passed in Switzerland last January by the Federal Chambers, has been overthrown by a vote of the people taken July 30th. "The law has been rejected in twenty-five cantons by a majority of 253,968 votes, or about four for every one who voted in the affirmative, only one canton (Neuchâtel) having a majority in favor of the law." It is believed, however, that this vote was directed more against centralization than against vaccination; that the cantons simply wish to pass their own laws on this, as on other subjects, and will individually vote in favor of compulsory vaccination.

— At a conference of the Société de Chirurgie, of Paris, a case of supernumerary digit was reported, which had been operated upon at the age of six months, but had grown out again so as to require a second operation when the child was ten years old. Stress was laid upon the necessity of disarticulating instead of dividing the bone in its continuity. There being two centres of ossification in the phalanges, one for the shaft and one for the upper extremity, if the articular cartilage is left intact the bone has an opportunity to be re-formed.

— *The Medical Student's Primer.* — What place is this? This is the Pathological Society. How does one know it is the Pathological Society? You know it by the specimens and smells. What does that gentleman say? He says he has made a post mortem. All the gentlemen make post mortems. They would rather make a post mortem than go to a party. What is that on the plate? That is a tumor. It is a very large tumor. It weighs one hundred and twelve pounds. The patient weighed eighty-eight pounds. Was the tumor removed from the patient? No, the patient was removed from the tumor. Did they save the patient? No, but they saved the tumor. What is this in the bottle? It is a tape-worm; it is three quarters of a mile long. Is that much for a tape-worm? It is, indeed, much for a tape-worm, but not much for the Pathological Society. — *Medical Record.*

— A Paris patent medicine man describes his chloral syrup as bottled sleep, — "*Le sommeil rendu en flacon.*"

NEW YORK.

— The last quarterly report of the commissioner of public works shows that during the six months ending July 1st the average surplus of water flowing over the Croton dam into the Hudson River above the quantity required to fill the reservoirs and lakes, and to keep the aqueduct running at its full capacity, was 500,000,000 gallons per day. The aqueduct was, therefore, able to deliver only one sixth of the supply, which might, with sufficient storage and conduit capacity, have been brought to the city. The aqueduct delivered without interruption a little over 95,000,000 gallons per day, and that is all that can with safety be passed through it. Yet, notwithstanding the urgent need for an increased supply of water, on account of the recent growth of the population, there does not seem to be any immediate prospect of the construction of an additional aqueduct.

— The United States Treasury Commission are endeavoring to secure a suitable location for the establishment of a quarantine station at New York for imported cattle, the object of which is to be to provide temporary shelter for cattle brought to the port from abroad, to separate all infected animals from the healthy, and also to keep each lot separate from the others until examined and taken away. In connection with the matter, however, Professor Law, of Cornell University, one of the commission, very justly observes, "It is absurd to quarantine against foreign cattle which have been selected with great care for the purpose of improving American breeds, and allowed a long voyage for incubation, and at the same time allow the purchase of home cattle in Eastern infected markets, and shipment of them without quarantine to any point West."

— A number of Chinese opium dens have recently been broken up by the police, and their occupants arrested and fined.

— It is stated that in the suit against the elevated railroads brought by Major Harrold, in which he obtained a verdict for thirty thousand dollars damages for injuries alleged to have been sustained by him, liens have been filed against the sum thus accorded for twenty-six thousand dollars by his lawyers for their fees. The railway companies are still disputing the case in the courts, on the ground, as they claim, that Major Harrold was counterfeiting the symptoms of an injury to the spine.

— The committee of the Queen's County Board of Supervisors appointed to investigate the charges made against the management of the county insane asylum at Mineola, Long Island, have had several meetings, and examined a number of witnesses, but the proceedings are said to have been little better than a farce, and it seems hardly likely that any good results will ensue.

— An exhibition has just been given before some of the officials of the Fire Department of an English invention designed to prevent suffocation from sulphur and smoke in cases of fire, and the bad effects of foul air in mines and wells. The principle of the invention is, that the wearer of the apparatus breathes the same air over and over again; the carbonic acid being absorbed from it at each expiration, and the requisite amount of oxygen restored. The apparatus is carried on the back, and consists of a strong sheet-copper cylinder, twelve inches by six and a half, with domed ends, and capable of holding four cubic feet of oxygen gas at a pressure of sixteen atmospheres. Above the cylinder and attached to its side is a square metal containing the carbonic acid filter. A flat bag of vulcanized rubber is fastened to the apparatus, and is connected by a rubber pipe over the shoulder with the outlet pipe of the filter.

— The recent death at Newport of a child of Mr. Henry B. Auchincloss, of New York, of sporadic cholera, with all the symptoms and post-mortem appearances of the Asiatic form of the disease, has given rise to a very considerable amount of excitement in the community, but will, no doubt, eventually result in the greatly improved sanitary condition of that resort. That there is much room for improvement, and that the present Board of Health is decidedly inefficient, seems to be the opinion of a number of the best physicians who have been in Newport during the present season. About the first of August Dr. John C. Peters, of New York, expressed his fears for the future health of the city publicly before the Newport Sanitary Protection Association. The sources of foul air, he said, were so abundant from a variety of preventible causes, that all those who lived in the town itself were constantly breathing an atmosphere more or less polluted. When the air of the city was contrasted with that of the cliffs and other outskirts, the difference was at once apparent; and in view of these facts he urged the appointment of a skilled Board of Health upon whom all responsibility should rest for the cleanliness and healthfulness of the city. Dr. J. L. Cabell, President of the National Board of Health, has stated in reference to the above death that, whether the case was one of specific infectious cholera (as is claimed by some physicians) or not, all the medical men who were acquainted with it concurred in the opinion that it was in a large degree dependent upon insanitary conditions existing in Washington Street (where Mr. Auchincloss resided) which require prompt removal. "The mode of discharging sewage from the houses on that street by drains from each house opening on the shore of the bay above low-water mark," he continues, "is fraught with great danger to the public health, and the nuisance demands abatement. I learn that it has long been a subject of complaint by residents of that part of the city, who have united in an application to the City Council for the substitution of an intersecting sewer with its outlets at some point in regard to which a commission of competent sanitarians, aided by a skilled engineer, should be consulted. On a former occasion I ventured to suggest to the then mayor of the city the expediency of transferring the duties of a health board to a body of of medical gentlemen conversant with sanitary questions. I now reiterate that advice with yet greater emphasis."

— In view of the fact that a number of individuals in the State have recently been legally declared sane, who had been confined as lunatics in institutions for considerable periods of time, a good deal of discussion has arisen in the community in regard to the abuses liable to occur in connection with insane asylums. At present there seems to be no adequate protection against the above class of abuses in these institutions, and it is proposed to have a law passed by the legislature empowering any magistrate before whom, on the certificate of two physicians, an alleged lunatic may be brought, instantly to summon a jury of three medical experts and three jurors taken from the grand jury list, who shall summarily investigate the case, with opportunity of defense. The present procedure is to summon such a jury only after a patient has been confined in an asylum for a longer or shorter period.

— Dr. Robert Tomes died at his residence in Brooklyn on the 28th of August, in the sixty-fifth year of his age. After a thorough preliminary education in this country and in Europe, he received his medical degree from the Edinburgh University, after which he was, for several years, a popular surgeon on the Pacific mail steamship line. He seems, however, to have preferred literature to his own profession, and about the year 1850 became a journalist and author, when he soon became one of the best known and most popular literary men in New York. In addition to writing several volumes of his own, he contributed a large number of articles to *Appleton's Encyclopædia*. His later years were principally passed in travel or in retirement among his books and friends.

Miscellany.

NON-RESTRAINT IN LUNATIC ASYLUMS.

Mr. Editor, — During a recent visit to New York I passed a short time at the Kings County Lunatic Asylum at Flatbush, which has recently attracted some attention owing to the fact that Dr. J. C. Shaw, the superintendent, has introduced the system of "non-restraint" into it. It is now more than two years since he began the experiment, and he is more than ever satisfied with it. There are now about eight hundred patients in the asylum; there have been more. Great difficulty was experienced at first with the attendants in making them understand that patients could live without restraint, but they now find it comparatively easy to manage them without it. Many of the old attendants left, but a more responsible and better set have succeeded them. "Seclusion," which is often the substitute for restraint, is used rarely, and only on the express order of the physician. Some patients had been in the habit of shutting themselves up in their rooms for years. One immense woman in particular was fed through a small opening in her door, and through this she apparently held all her communication with the world. She, however, was finally overcome, and now can be seen gracing the ward settees, a brilliant example of non-seclusion.

One woman I saw was well advanced in paralytic dementia, and was shouting and yelling, and crawling about the ward on her hands and knees, and going through the motions of wiping up the floor. It seemed to me that she would exhaust herself more with these violent exertions than if restrained in a chair, but Dr. Shaw said she did no harm, and so he let her go.

There are not many accidents to either the patients or attendants in consequence of "non-restraint." If a patient receives a black eye or other injury, if there is fairly good reason for supposing the attendant may have unnecessarily been the cause of it, he is at once discharged, Dr. Shaw believing that it is better for an innocent attendant to occasionally be unjustly dealt with than for a helpless patient to suffer.

Sedatives are used in very small quantities, ranging from one to seven or eight doses nightly, and I believe the latter number represents a rare maximum.

The general class of patients is similar to that received at Danvers, being a little worse if anything. This means that the patients are chiefly Irish; a majority of them are chronic cases on admission, and many violent and noisy, making them difficult to control. In addition to this they are in bad physical condition and illiterate. Taking such a class as this to be treated in a county pauper institution, and we see at once that the conditions are not the most favorable for a trial of "non-restraint."

Dr. Shaw says very plainly that he should use restraint if he had a case where he thought it necessary, and he also feels entirely at liberty to use sedatives on the same principle. Yours truly,

Walter Channing.

Brookline, *September* 12, 1882.

ASIATIC CHOLERA AT NEWPORT.

Much having been said in the daily papers about a case of supposed Asiatic cholera at Newport, it may be of interest to our readers to see the conclusions of Dr. J. L. Cabell after his investigation made in the capacity of President of the National Board of Health. It is as follows: —

"As a result of the conference held at the residence of Mr. Auchincloss this morning, at which the three physicians who attended the case, two others who had made the post-mortem examination, and Dr. Turner, City Physician, assisted, and severally expressed their views, I derived the opinion that the gentlemen who had concurred in the diagnosis of Asiatic cholera did not intend to affirm that a disease of exotic origin had been introduced in Newport, or that the case in question was necessarily of an infectious nature; but neither, on the other hand, would they pronounce a negative opinion as to either of those propositions. They did affirm that the symptoms in the case in question were not distinguishable from those of Asiatic cholera, with which disease, as it appeared in several epidemics of this country and of Western Europe, you had been familiar, and of which Dr. Fisher had had a large and recent experience in China and Japan. But I did not understand that it was maintained that the symptomatology of an isolated case, without evidence of importation from a country in which Asiatic cholera was prevailing, and without being followed by other cases, could satisfactorily establish its identity with that disease. A few more days will doubtless settle the question beyond all controversy. In the mean time I am constrained to avow my belief that the probabilities are decidedly adverse [to the view that the case was one of specific infectious cholera, while I freely admit that the symptoms and post-mortem appearances were entirely consistent with such a view. On one point the conferees were, I believe, quite unanimous. They concurred in the opinion that, whether the case in question was or was not specific, it was in a large degree dependent upon insanitary conditions, existing in Washington Street, which require prompt removal. The mode of discharging sewage from the houses on that street by drains from each house opening on the shore of the bay above low-water mark is fraught with great danger to the public health, and the nuisance demands abatement. I learn that it has been long a subject of complaint by residents of that part of the city, who have united in an application to the City Council for the substitution of an intercepting sewer, with its outlets at some unobjectionable point, in regard to which a commission of competent sanitarians, aided by a skilled engineer, should be consulted. On a former occasion I ventured to suggest to the then mayor of the city the expediency of transferring the duties of a health board to a body of medical gentlemen conversant with sanitary questions. I now reiterate that advice with yet greater emphasis."

It is said that much of the feeling excited by this case has been due to differences between the Board of Aldermen of the municipality, who, under the present law, constitute the local Board of Health, and the Sanitary Protection Association, a society composed largely of summer residents. This latter Association, which employs its own sanitary officers and plumbers for the protection of its members, wishes the sanitary direction of the whole city placed in professional hands. The aldermen are unwilling to forego their present prerogative, and claim that the publicity given to this case by the physicians and the Protective Association is incommensurate with its importance, and is intended to discredit the present Board of Health, and to commit its functions to new hands, — a disposition, which, as will be seen, Dr. Cabell's report strongly favors.

◆

THE DECREASE IN DEATHS FROM CHILD-BIRTH.

It is just a hundred years since the expectation of life among English women became equal, for insurance purposes, to that of men. Prior to 1772 women were compelled to pay an extra charge. At present the female expectation of life is about three years in advance of that of males.

A great factor in this prolongation of life is undoubtedly the increased knowledge and skill as regards the management of pregnancy and childbirth. There is hardly any progess in the past century which can be contemplated with such deep satisfaction as this diminished mortality rate.

Some figures recently collected by Dr. E. H. Sieveking may here be cited in illustration: —

The mortality of lying-in women in London was, in 1660 to 1680, one death to 44; 1700 to 1740, one death to 70; 1760 to 1780, one death to 82.

In the Hotel Dieu, Paris, in 1786, it was one in 15.

At the beginning of the century the hospital mortality declined very much, while the total mortality also became considerably less.

In Prussia, in 1817, it was one in 112. In the whole city of London, during the years 1780 to 1820, it was one in 108.5.

From this time there has been an almost steady decrease in the death-rate of parturient women. This may be shown by a table compiled from statistics given by Sir James Simpson and Dr. Farr: —

Years.	Proportion of Maternal Deaths in Childbed: England and Wales.
1839	1 in 169
1840	1 in 168
1841	1 in 170
1842	1 in 192
1847	1 in 166
1851	1 in 192
1881	1 in 268

A distinction has to be made between the mortality rate of primiparæ and multiparæ. Among 36,776 cases collected by Hardy and McClintock, Matthews Duncan and Johnson, and Sinclair, the ratio of deaths among primiparæ was one in 62; among multiparæ, one in 124. This is certainly too high a rate, however, to represent the present state of affairs.

We can say now that whereas one hundred years ago one mother out of every 80 died in childbed, at the present time only one in 260 to 270 fails to survive. Obstetricians, midwives, sanitarians, all lay some claim to this prodigious advance in the saving of life. No single class or single influence, however, can be considered to have special and exclusive merit. Much is due to the advance in general knowledge and intelligence. More is due to the medical profession undoubtedly than to any other one agency. — *New York Medical Record.*

◆

ANOTHER DEATH FROM CHLOROFORM.

The *Medical Times and Gazette* reports another instance of chloroform poisoning as follows: —

"A fatal case from the administration of chloroform was recently investigated by Mr. W. J. Payne at Guy's Hospital. The deceased, a man aged thirty-six, was employed by a firm of engineers in Southwark-bridge Road. Whilst cleaning the machine at which he worked, his left thumb got jammed between the cogs. A fellow-workman deposed that he stopped the machine, and took the deceased to Guy's Hospital. The house-surgeon, who attended to the man, said the thumb must come off, and advised the administration of chloroform. Witness remained whilst it was administered, but saw no one examine deceased's heart to see if he could bear it. The man struggled very much at first, and then became as if dead. The house-surgeon is reported to have deposed that the left thumb of the deceased was completely shattered by the machine, and the bone was broken in six places. He advised the administration of chloroform before the operation, and the deceased assented. He asked no question of the deceased as to his health, nor was the heart examined, but, judging from the pulse, he thought the deceased had no organic disease. While giving chloroform with the inhaler, on which he had put three separate doses of thirty drops of chloroform, the deceased showed symptoms which necessitated restorative measures being used. Upon the patient coming to, he, the witness, told the dresser, who was to operate, to proceed as rapidly as possible, as he could not administer chloroform again, but just as the operation was commenced the pulse failed, the heart ceased to beat, and the man was dead. The post-mortem examination showed that death was due to chloroform acting upon a fatty heart. Witness had had a great deal of experience in administering chloroform, and in reply to the coroner, he added that though laughing-gas was not dangerous, its effects did not last long enough to permit an operation like this, which would have taken a quarter of an hour. The death-rate from the administration of chloroform was, he said, about one per thousand. The jury returned a verdict of accidental death."

A VISIT TO GHEEL.

THE Philadelphia *Medical Times* (August 26th) published an extract from a letter embodying the personal observations and impressions of the insane colony at Gheel made upon the spot by an American physician. We infer that the observations are reliable, and they need no comments; we therefore simply reproduce the extract: —

"The guide was a sort of troublesome necessity, as the people could have refused us entrance if so disposed, and I doubt whether wholly reliable, as, for instance, in the morning being asked concerning illegitimate children, he said: 'One in four years;' in the afternoon, in answer to the same question, he said: 'One in two years.' Likewise, in the morning, 'accidents never happened;' later in the day he remembered of one child being killed by a patient who was taking care of it, one born was burned, one patient assisting in loading hay put his fork into a man and attempted to toss him up, the injury proving fatal. These things made me a trifle skeptical concerning the utter absence of accidents. Concerning melancholics, nothing could be elicited further than that, like the homicidal, they were sent to Bruges. The physician in charge directed to have us taken into the least populous third of the colony and the newest portion; but if the remainder is worse than that which we saw, as one might infer, I am sorry for Belgium. The weather was rainy, and so we found the people mainly at home, and took their landlords by surprise, and, taken as a whole, it reminded me of an early visit around a hospital before things could be put in order. In the best houses we found beds made up and things in order; in the majority it was the reverse. Patients of one sex only are allotted to a family; their rooms must be a brick structure, usually an addition, — a sort of lean-to against the cottage, averaging 6 × 8 × 6 feet; ground-floor well paved with brick, — therefore no wooden floor; windows 2 × 2 feet, barred, and a sort of a cat-hole on a level with the floor, for ventilation and the escape of scrub-water. The beds were generally box arrangements with straw, covered with a sheet; in other cases, an ordinary straw tick and sheets and blankets, coarse, but sufficient. They are locked in at night.

"What I have to say applies to people in the farm-houses, having visited only a few houses in the town. The fare very usually is the ordinary black bread and coffee (chiccory) for breakfast, boiled potatoes, bacon, and bread for dinner, and bread and buttermilk for supper. The farmers receive twelve cents per day per person, for which they are boarded and taken care of. Three cents are added for the dirty.

"The chief physician visits the colony once in six months; the physician of the section once in two weeks, unless sent for. A supervisor makes the tour of the farm-houses daily; but if he is like the one who accompanied us, he is harmless, the farmer who has the most likely daughters getting the least trouble. Restraint is by rule only applied by order of the physician of the section. In the thirty houses I visited I saw only one *camisole*. I saw one woman with iron anklets so rusted that a smith would be required to remove it. It was applied to keep her from running away. The use of hopples is not infrequent with cases disposed to elope. Many of those requiring restraint are sent to Bruges.

"The provisions for heating are apparently *nil;* there is certainly nothing in the room of the patient nor in any other of the house, except the kitchen, whose large fire-place, judging from the ceiling, gives out more smoke than heat. One family kept their patient warm with bottles of hot water to the feet, and a layer of hay.

"Gheel may do for Belgium, but not for us. Even in Belgium things are changing greatly from year to year, according to accounts; and from statements of inhabitants of Gheel, it is only a question of time when this system will have to be given up. In the country they are miserably taken care of, and in town, where men and women go about unaccompanied, results easily anticipated occur. We found some houses which had rooms to let. The reasons are suggestive: in one case the family used the patient's blanket in a winter night; in another the patient was abused; a third had a female patient who had become pregnant; a fourth became vacant for the same reason. I should judge there is more trouble on this score than is admitted. The fact that there are two hundred vacant beds in the colony now was used to corroborate the statement above made, that this system of taking care of the insane would have to be abandoned.

"Heretofore I had entertained some poetical ideas concerning Gheel; the prose that I saw was sufficient to dispel them. The guide told me that the majority of visitors went no farther than the town. Having myself seen more of the country than of the town, I may have seen less of the good features and more of the bad than is usually the case; but I am convinced that the general plan of Willard and the 'Relief' at Washington are much better than this."

A TEST FOR SIMULATED ONE-SIDED DEAFNESS.

DAVID COGGIN, M. D., SALEM, MASS.

IN the *Archives of Otology*, vol. viii., page 177, the writer suggested the use of Camman's stethoscope as a test for simulated one-sided deafness, having employed it in a medico-legal case three years before when alone, and therefore unable to try other methods.

Subsequently, owing to the possibility of direct sound conduction by the metallic tubes of the stethoscope, the test was slightly modified, and is now applied as follows: Two pieces of soft rubber tubing, one metre in length and eight millimetres in diameter, are required. One end of each is introduced into the two metal sockets, while the opposite ends are stretched over the wood tips that ordinarily fit into the sockets; a wooden plug is made to close one of the tips tightly when forced in, and the test is ready. The claimant says he is deaf in his right ear. The plug is deftly fitted into the left tip, and he is asked to put on the stethoscope. On speaking and whispering in the thoracic cup or mouth-piece, if he is malingering, he hears and answers questions addressed to him, though it is with his right or "deaf" ear that he hears. Now remove the tube containing the plug that is in his left or "good" ear and make him aware of the fact. Then with the other tube still applied to his right or "deaf" ear (with which he has conclusively shown that he does hear), close the left meatus by pressing the tragus firmly against it.

Speak now in the mouth-piece and he will stoutly affirm that he cannot hear with his right ear. Thus his shamming is exposed.

In two instances of this variety of simulation this simple and available test has proved to be effective.

◆

PORRO'S OPERATION.

THE second successful case of Porro's operation in England is described by the operator, Mr. Savage, in the *British Medical Journal*, having been performed in July last. The patient was twenty-five years old, was married in January, 1882; catamenia regular till March 18th. In June she complained of pain and a slight bloody discharge. A tumor was found on the right side of the abdomen, very hard, dull on percussion, non-fluctuating, and most prominent midway between the umbilicus and iliac crest. It also extended to the left side. There were evidences of pregnancy. In a few days the pain had greatly increased. She had no rest nor sleep, and for some days had been almost constantly vomiting. Her face had the aspect of much suffering, and she was becoming thinner daily. The tumor was very hard, and rose to the level of the umbilicus. It was very prominent on the right side, having almost the appearance of an abscess that wanted to be opened. It was dull and non-fluctuant. It gradually flattened over on to the left side. The prominent part of the tumor was very tender indeed, especially on its right side. Both flanks were resonant, and the tension of the abdominal wall was most extreme. Through the vagina the cervix was felt very high up on the left, soft, and a little open. On the right side, through the vaginal roof, the swelling projected downwards, and was felt to be in direct relation with the abdominal tumor, and it was quite immovable. The uterus appeared to be quite distinct from the tumor; there was a sulcus between it and the cervix, and pressure from above did not affect the cervix.

In view of the rapidly increasing severity of the symptoms, operation at least to the extent of exploratory incision was advised. The patient being etherized, an incision nine inches long was made, the upper portion extending nearly two inches above the umbilicus. The tumor was found to be a large solid fibromyoma growing out, and forming part of the right side, of the uterus. The cavity of the uterus was found to contain a fœtus, and was pushed upwards and to the left. The right ovary and Fallopian tube were in front of the tumor, and almost black from compression between it and the abdominal wall.

It was thought that it would be safer and easier to remove the whole mass, which was accordingly done, rather than attempt removal of the tumor alone. The stump was secured by a wire clamp, and its serous outer surface was attached by silk to the abdominal wound. Two thick silk ligatures were also tied round the stump for security. Very little blood was lost, and much care was taken to prevent any from being left behind the bladder, or on the vaginal roof, which appeared to be considerably dragged upwards by the clamped stump. A glass drainage tube was inserted just above the stump, and perchloride of iron was applied to the end of the stump. After the operation, which lasted about an hour and a half, the finger passed into the vagina detected the cervix high up, but otherwise normal, showing that the wire had encircled the uterus at about the level of the inner os, and had not included any of the vaginal roof with danger to the ureters. Only about four ounces of ether were administered. The mass removed weighed nearly nine pounds, and contained the fœtus with membranes intact. The recovery after this formidable operation was uninterrupted. The breasts secreted milk on the fourth day. The clamp came away on the twenty-first day.

◆

A SUCCESSFUL CASE OF TRANSFUSION.

A CASE was reported in the Obstetric Section of the British Medical Association, by Dr. William Walter, in which transfusion apparently saved life after severe post-partum hæmorrhage. The patient was confined with her second child, and the physician did not reach her till ten minutes after the expulsion of the child and the placenta, the labor having lasted only two hours. On his arrival the condition of the patient was most critical; she lay in a pool of blood, her face deadly pale, and the pulse scarcely to be felt. Her abdomen was distended with an enlarged uterus, that reached almost to the ensiform cartilage. Not a moment was lost in firmly grasping the fundus uteri, and in resorting to the ordinary means of checking hæmorrhage, including the free administration of ergot; but no contraction ensued until the hand had been introduced into the interior of the uterus, and the clots which filled the uterus thoroughly removed; and these, when lifted into the chamber-utensil containing the placenta, completely filled that vessel. The uterine contraction was soon followed by dilatation, with a return of the hæmorrhage; and for an hour contractions and dilatations followed one another at short intervals, with repeated recurrence of hæmorrhage. During this time, pressure over the fundus was maintained, and occasionally the hand was reinserted into the cavity of the uterus, and the organ manipulated bimanually.

Finally, permanent uterine contraction was secured, but the patient was *in extremis*, unconscious, with scarcely perceptible respiration, and the pulse only to be felt at intervals. Transfusion was at once decided on, and performed as soon as practicable, the patient's mother furnishing the blood. Only four ounces had been withdrawn from the latter when one of the medical attendants reported that the patient appeared to be dead. Without further delay these four ounces were defibrinated and injected into the vein, which, from its collapsed condition, had been found with difficulty.

In from ten to twelve minutes all the blood (nearly four ounces) was injected, and the patient's arm bound up. Almost immediately respiration became distinctly visible and audible, without the occurrence of any dyspnœa; the pulse at the same time returned to the wrist; and, in the course of a quarter of an hour, the insensibility gave way to consciousness, and she was able to recognize her friends. Her convalescence was steady and uncomplicated; and within a month she was able to walk out of doors.

It is noted incidentally that the mother, from whom the blood was taken, and whose menstrual period was due in two days, did not menstruate that month, though otherwise always regular.

◆

THE HEREDITARY TENDENCY OF BRIGHT'S DISEASE.

AN article by Dr. Kidd in the *Practitioner* for August shows a somewhat remarkable family history of Bright's disease: —

"Mrs. ——, aged sixty, one of a family of most temperate habits, died in 1860 of Bright's disease of the kidneys which had existed for many years. It first showed itself after one of her confinements; most of the children born after that confinement became the subjects of kidney disease. All or most born before that confinement have not suffered from it. She had twelve children, of these *seven died of kidney disease.* Of her remaining five children two have for many years been suffering from the same disease. Of her grandchildren *two at least* are subjects of kidney disease. Two of her brothers died of Bright's disease in early manhood."

Of the seven cases reported, two at least appear to have begun with an attack of scarlatina. Another experienced a fatal exacerbation as a result of the same disease. All the patients lived pretty active lives, and most of them took considerable hygienic precautions in their way of living, especially with reference to taking cold. Special pains were taken to maintain cutaneous activity by abundant exercise, the wearing of Shetland flannels, etc. The winters were spent usually south of the Alps. Of the drugs used the author speaks most confidently of dilute nitric acid and tincture of the perchloride of iron. The milk treatment was found effective only in acute and subacute cases.

On the subject of baths the writer says: —

"After twenty-five years' experience of the use of all kinds of baths in the treatment of kidney disease, I have found lamp baths excel all others in real efficacy. The spirit-lamp bath without water has a better effect than the vapor of water boiling over the spirit-lamp, which most patients complain of as being more relaxing and exhausting than the spirit-lamp alone. Used at bed-time for fifteen or twenty minutes, three or four times a week, the effect is all we can desire. The gentle moisture kept up in bed all night after the bath does much more good than the Turkish bath, the good effect of which is neutralized by exposure to the cold air afterwards. When the patient lives in the establishment so as to go straight to bed after the Turkish bath, its use is invaluable. Under such conditions it may be taken even twice a day with advantage."

◆

THE LIABILITY OF CORPORATIONS FOR SUPPLYING IMPURE WATER.

AT Leeds the case of "Milnes *versus* the Corporation of Huddersfield," has been heard before Mr. Justice Mathew. This case was one of a most important character, and excited considerable interest. The plaintiff, a solicitor, practicing at Huddersfield, had suffered great injuries by drinking water that had been supplied by the corporation, which had produced lead-poisoning. The plaintiff's case was that the defendants had failed in their statutory duty to supply pure and wholesome water for domestic purposes, or that the defendants had failed to discharge the common law duty to supply water that was fit for consumption. Symptoms of lead-poisoning set in about a year ago, and since that time the plaintiff has been in a most critical condition. At one time he lost his reason for several days, being attacked by a form of delirium consistent with lead-poisoning. He was affected by wrist dropping and other strong indications of lead-poisoning, and in consequence of his illness his practice was greatly reduced. The water which the plaintiff drank, after leaving the main, passed into the plaintiff's premises through leaden service pipes, which had been put down by the corporation at the request and at the expense of the plaintiff or his landlord. It was hardly disputed by the defendants that this water was unwholesome and had injured the plaintiff, and by the plaintiff that the water in the main was in the same natural condition as received from the springs, and was wholesome. The defendants contended that if the plaintiff was entitled to recover for a breach of a statutory obligation, his remedy was under the penalty clause of the Waterworks Clauses Act, 1847, but if he was entitled to recover as for a breach of a common duty, it was not the case of an ordinary vendor warranting the fitness of goods for the purposes for which they were sold, as the corporation were compulsory vendors of the water they were bound by their Acts of Parliament to supply. They further urged that if the Public Health Act were relied upon, no such notice had been given as was required by that statute. But the main question was whether it was the duty of the corporation to supply water to the plaintiff that would be wholesome after passing through the leaden service pipes, or whether their obligation was discharged by supplying water that was wholesome at the time when it left the main. The only matter for the jury was to assess the amount of compensation that the plaintiff would be entitled to in case it should ultimately be decided that the plaintiff was entitled to succeed. The jury awarded £2000 damages. The case was then adjourned in order that the questions of law might be argued before the judge in London. — *The Sanitary Record.*

◆

SUBINVOLUTION OF THE UTERUS.

THE discussion on subinvolution in the Obstetric Section of the British Medical Association called forth very varying opinions as to the ætiology of that condition. The opening paper by Dr. Williams took for a basis of clinical diagnosis of that condition in the puerperal woman, the non-disappearance of the fundus below the pubes at the twelfth day — a somewhat arbitrary dividing line, and, as the speaker admitted, liable to fallacies in its information regarding the actual size of the uterus.

Of the causes which have been variously assigned for this condition the speaker believed the following to be operative: General debility; multiparity at an advanced age; post-partum hæmorrhage; retention of portions of the placenta and membranes; lacerations of the perinæum, and pelvic inflammations.

He disagreed with other authorities as to any such effect being observable from multiparity, protracted labor, and laceration of the cervix. It may be of interest to quote the figures on which he bases his conclusions with reference to these latter points: —

"I have had delivered under my care at the General Lying-in Hospital this year 113 cases; 58 multiparæ, and 55 primiparæ. In 56 multiparæ the uterus was in the pelvis on or before the twelfth day; in six the fundus was above the brim on the fourteenth day; and in two the time was not noted; so that in 50 cases it may be assumed that involution proceeded normally. Of these, seven had a temperature of 102° F., or higher for six or more days, and six had laceration of the perinæum. One of the cases in which the uterus did not sink into the pelvis until the fourteenth day had sharp fever; the other was feverish for four days; neither had tear of the perinæum. Of the 55 primiparæ, 52 had normal labors, in two forceps were used, and in one the breech presented. In 40 the uterus was in the pelvis on the twelfth day; in 12 the fundus was above the brim at that period; and in three the condition was not noted."

Regarding the relation of cervical lesions to the production of subinvolution, he says: —

"There were 28 cases in which the cervix was lacerated; in 18 deeply, and in 10 slightly. Involution went on well in 15, and badly in three of those which had deep tears; well in six, and badly in four of those which had slight tears. Hence it does not appear that lacerations of the cervix affect the process, for a larger proportion of cases of retarded involution was met with in women with slight than in those with severe tears."

One is disposed to question the legitimacy of the conclusion from these statistics, which certainly show that subinvolution occurred in twenty-five per cent. of all the cases of lacerated cervix. And, moreover, it is quite conceivable that the greatest reflex effect on the uterine circulation might not always proceed from the deepest tear. It is worthy of notice that Dr. Playfair in his comments on the paper differed strongly from the reader on this point, and said that he had found lacerations of the cervix connected with subinvolution in a large proportion of cases coming under his care.

◆

HYSTERO-EPILEPSY.

CLEARNESS is certainly not promoted in the discussions on hystero-epilepsy by the entirely different sense which different writers attach to the word. It would seem as if the French neurologists who invented the term had a right to claim its exclusive application to the group of symptoms to which they originally applied it, even though philological considerations would favor another use of the word. As it is, we have beside Charcot's disease, namely, a peculiar and aggravated hysteria, marked by a regular sequence embracing "great movements," "emotional attitudes," etc., characterized by certain hystero-genetic zones of which the ovarian region is the most prominent, and entirely distinct from the disease known as epilepsy, various other conditions denoted by writers under the same term. Some use it to express a state partaking of the nature both of hysteria and epilepsy, and with some it seems to be an aggravated form of the latter disease.

A paper read in the obstetric section of the British Medical Association, defines the disease on literal philological grounds as an epilepsy whose manifestations depend upon uterine irritation. The writer even goes so far in literalness as to reject those cases where the ovary is the organ at fault, and gives as a typical case of the disease a woman who suffered from dysmenorrhœa, which precipitated attacks at the menstrual period (the seizures being essentially epileptic in their nature), and in whom a successful treatment of the dysmenorrhœa removed the epilepsy. A person comparing this "typical case" with those of Charcot and Richer, will be a good deal puzzled to reconcile them.

And now we have reported in the *Progrès Médical* an instance of hystero-epilepsy (it is unnecessary to say in the Charcot sense) in a boy thirteen years of age.

His parents were first cousins. His father was subject to migraine in early life; his mother had spasmodic wry-neck in infancy, one of her sisters was idiotic (?). The patient was the eldest child; he seems to have been always an excitable child, and easily frightened, subject to night-terrors. His hysterical attacks commenced in the month of February, 1880, about a month before he came under observation. The first one came on whilst he was at work at school, with vertigo, and, after lasting two hours, was terminated by singing, crying, and laughter. The senses of hearing, sight, taste, and smell were decidedly less acute on the left than on the right side, and the same may be said of the common sensibility of his buccal mucous membrane and conjunctiva. His intellectual faculties seemed unimpaired, and he was said to be gentle and affectionate. There was no history of masturbation. On examination several different areas were found over which pressure was painful (*zones hystérogènes*). They were situated as follows: (1.) "*Clou hystérique*," at a small spot, two centimetres in front of the vertex. (2.) "*Rachialgie*," over the spinous processes of the fifth, sixth, and seventh dorsal vertebræ. (3.) Symmetrical spots on each side in the fifth intercostal space, midway between the nipple and the axillary line. (4.) A painful spot in the seventh left intercostal space, about five centimetres from the spine. (5.) A spot over the manubrium sterni. (6.) Symmetrical spots over the loins. (7.) A spot almost over the centre of the iliac fossæ, corresponding to the "ovarian" region; that on the left side is the most marked. The attacks recurred at regular intervals, and lasted from one to two hours. They were preceded by an aura, which consisted of a sensation of a ball rising from the penis to the epigastrium, and thence to the level of the larynx. This was followed by the "*clou hystérique*," and then he lost consciousness. The attacks were characterized by a preliminary stage of rigidity of unusually short duration, succeeded by a clonic period, which was, on the other hand, of unusual length, comprising varied contortions and passional attitudes. During this period he would try, by different methods, to injure himself or those around him. The attack concluded, he sometimes had hallucinations of sight. He also presented a hemianæsthesia, at one time on the left side, at another on the right.

It would be of interest to know, what is not stated, whether compression of the testicles has an effect in shortening the attack corresponding to the similar operation upon their analogue in the female.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 9, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	609	282	33.13	8.53	19.02	1.80	2.78
Philadelphia	846,984	375	158	10.11	.26	—	3.48	5.05
Brooklyn	566,689	242	130	35.52	6.61	22.30	—	4.96
Chicago	503,304	243	166	43.52	4.94	34.98	2.46	1.65
Boston	362,535	187	94	35.24	4.27	25.10	3.20	3.74
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	174	74	39.57	1.15	12.65	3.45	8.62
Cincinnati	255,708	105	60	28.51	7.62	9.52	7.62	4.76
New Orleans	216,140	95	20	—	—	—	—	—
District of Columbia	177,638	71	34	32.39	5.63	15.49	—	1.41
Pittsburg	156,381	72	35	38.92	4.17	13.90	11.12	6.95
Buffalo	155,137	104	62	42.24	6.02	24.96	1.92	.96
Milwaukee	115,578	65	—	48.45	6.15	30.76	1.54	1.54
Providence	104,857	37	14	35.13	5.40	24.32	5.40	—
New Haven	62,882	27	9	25.91	3.70	3.70	11.11	—
Charleston	49,999	15	7	6.66	6.66	6.66	—	—
Nashville	43,461	23	6	26.08	—	13.04	—	4.35
Lowell	59,485	25	12	28.00	—	20.00	—	4.00
Worcester	58,295	15	7	33.33	20.00	26.66	—	—
Cambridge	52,740	13	6	53.83	—	46.14	—	—
Fall River	49,006	25	10	56.00	4.00	28.00	20.00	4.00
Lawrence	39,178	15	5	13.33	6.66	6.66	—	6.66
Lynn	38,284	22	8	50.00	—	27.27	9.09	—
Springfield	33,340	23	11	43.47	—	26.04	4.34	—
Salem	27,598	10	6	30.00	—	20.00	10.00	—
New Bedford	26,875	10	9	70.00	—	60.00	10.00	—
Somerville	24,985	6	3	33.33	—	16.66	16.66	—
Holyoke	21,851	9	5	11.11	33.33	11.11	—	—
Chelsea	21,785	9	2	33.33	—	11.11	—	11.11
Taunton	21,213	7	3	14.28	—	—	—	—
Gloucester	19,329	8	2	—	—	—	—	—
Haverhill	18,475	12	2	33.33	—	33.33	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	1	1	—	—	—	—	—
Newburyport	13,537	14	4	21.42	—	21.42	—	—
Fitchburg	12,405	6	3	50.00	—	50.00	—	—
Malden	12,017	1	1	—	—	—	—	—
Massachusetts towns	142,516	72	30	47.26	1.39	23.36	2.78	5.56

Deaths reported 2747 (no report from St. Louis): under five years of age 1281: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 819, consumption 300, lung diseases 130, diarrhœal diseases 470, diphtheria and croup 98, typhoid fever 73, malarial fever 58, whooping-cough 46, scarlet fever 33, cerebro-spinal meningitis 22, measles seven, erysipelas seven, puerperal fever five. From *malarial fever*, New York 27, District of Columbia 10, Baltimore seven, Brooklyn five, New Haven three, Chicago, Cincinnati, and Nashville two each. From *whooping-cough*, New York 18, Brooklyn nine, Buffalo four, Boston, Pittsburgh, and Providence two each, Philadelphia, Chicago, Baltimore, Cincinnati, District of Columbia, Milwaukee, Springfield, Malden, and Northampton one each. From *scarlet fever*, Brooklyn and Cincinnati six, New York and Buffalo five each, Boston three, Philadelphia two, Chicago, Baltimore, Pittsburgh, Milwaukee, Lynn, and Chelsea one each. From *cerebro-spinal meningitis*, New York, Chicago, and Buffalo three each, Lynn two, Philadelphia, Baltimore, Cincinnati, Pittsburgh, Milwaukee, Worcester, Cambridge, Fall River, Springfield, Taunton, and Marblehead one each. From *measles*, New York three, Buffalo two, Chicago and Pittsburgh one each. From *erysipelas*, New York, Philadelphia, Cincinnati, Buffalo, Lowell, and Springfield one each. From *puerperal fever*, Chicago two, New York, Boston, and Quincy one each.

Sixty-four cases of small-pox were reported in Baltimore, Cincinnati 10, Brooklyn one; typhoid fever 15, scarlet fever 11, diphtheria seven, in Boston; scarlet fever 14, and diphtheria five, in Milwaukee.

In 39 cities and towns of Massachusetts, with a population of 1,086,052 (population of the State 1,783,086), the total death-rate for the week was 23.46, against 24.29 and 30.51 for the previous two weeks.

For the week ending August 19th, in 167 German cities and towns, with an estimated population of 8,264,615, the death-rate was 26.5. Deaths reported 4215: under five years of age 2386; consumption 479, diarrhœal diseases 359, lung diseases 298, diphtheria and croup 111, scarlet fever 89, typhoid fever 70, whooping-cough 64, measles and rötheln 22, puerperal fever 12. The death-rates ranged from 14.1 in Metz to 41.1 in Königsberg; Breslau 35.2; Munich 24; Dresden 26.1; Berlin 29.4; Leipzig 22.7; Hamburg 26.8; Cologne 34.7; Frankfort a. M. 18.9.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending August 26th, the death-rate was 22.7. Deaths reported 3680: acute diseases of the respiratory organs (London) 199, diarrhœa 751, whooping-cough 95, scarlet fever 75, fever 53, measles 50, diphtheria 31, small-pox (London three) six. The death-rates ranged from 13.7 in Derby to 34.5 in Hull; London 18.8; Birkenhead 19.3; Norwich 21.2; Sunderland 27.6; Liverpool 28.6; Manchester 29.3; Salford 32. In Edinburg 16.2; Glasgow 19.7; Dublin 23.8.

For the week ending August 26th, in the Swiss towns, population 494,390, there were 38 deaths from diarrhœal diseases, consumption 23, lung diseases 11, erysipelas five, diphtheria and croup four, scarlet fever three, whooping-cough two, typhoid fever two, measles one. The death-rates were, at Geneva 15.5; Zurich 14.2; Basle 18.7; Berne 19.1.

CENSORS' MEETING. — The Censors of the Suffolk District Medical Society will meet for the examination of candidates at 19 Boylston Place, on Thursday, September 28th, at three o'clock. H. C. HAVEN, *Secretary*.

APPOINTMENTS. — The Overseers of Harvard University have confirmed the nomination of David W. Cheever as Professor of Surgery, and Charles P. Lyman as Professor of Veterinary Medicine.

Original Articles.

TWO SUCCESSFUL CASES OF REMOVAL OF UTERUS AND APPENDAGES.

BY FREDERIC HENRY GERRISH, A. M., M. D.,

Professor of Anatomy in Bowdoin College, Surgeon to the Maine General Hospital.

The operation of removing the greater part of the womb with its appendages occupies about the same position in the esteem of the profession that ovariotomy did not many years ago: most consider it almost homicidal; many would justify it as a last resort; a few are beginning to think that, in the future, it may properly be employed with as much freedom and confidence as ovariotomy now is. The true place of hysterectomy is, however, far from being determined, chiefly because there are not sufficient data from which to form a judgment. This report is presented in the belief that it is the duty of every surgeon to make known to the profession the results of all operations whose utility is undecided, and in the hope that it may not be without value in helping to settle some of the questions involved. I have performed the operation in no cases but these, and have been able to learn of only five others in this State, all of which terminated fatally. If I have any further experience, good or bad, it shall be seasonably reported.

Case I. L. W., aged forty-four, married, was admitted to the Maine General Hospital on the 11th of April, 1881, with the following history: She was never strong, and had a cough a good deal of the time from her childhood up. During her first and only pregnancy her health was better, and she passed through the period of gestation without any particular difficulty, being delivered instrumentally of a male child, after a hard labor, thirteen and a half years ago. A few days subsequently she noticed an abdominal growth, which has always remained. Her size would suggest pregnancy at term, but she thinks she has been as large for thirteen years past as she is now. Six or seven years ago, she began to have uterine hæmorrhage almost all the time. Occasionally there would be a week of exemption from the bleeding. This excessive loss of blood, which lasted three years, greatly weakened her, and she has been able to do no housework since. Excepting this term of three years, menstruation has been about as regular as in most women, but the pain has been very severe for three days at each period. For a year and a half past she has had constantly a thin leucorrhœal discharge, which has been as profuse as the menstrual flow. She has never had real pain in the tumor, but almost unceasingly a great deal of "distress," with a sensation of burning in the abdomen. There has been some pain in the back, but not of a severe character. During the last year she has been confined to her bed most of the time. Her appetite is extremely poor, her sleep light and broken, and her stomach weak. She is pallid, anæmic, feeble, and evidently getting worse.

Examination showed a solid, abdominal tumor, symmetrically developed, as large as a gravid uterus at term. The uterine canal measured nine centimeters (3.5 inches) in length, and seemed to be movable independently of the tumor. This appearance was afterwards found to have been due to the unusual breadth of the cavity, which was about the same as its length. As the sound moved, it seemed to carry the womb with it; really it was merely turned about in the hollow of the uterus.

The patient being willing to take any risk in the effort to rid herself of the tumor, it was decided to give her the chance afforded by operation, and she was put upon a preparatory treatment of a tonic, mildly laxative, and hypnotic nature.

On the 24th of April, 1881, I performed the operation, being assisted by Drs. Greene, Weeks, Gordon, Thayer, Hunt, Pendleton, and Hill, of this city. The primary incision was made in the linea alba, and was necessarily carried about four centimeters (1.5 inches) above the navel in order to give exit to the tumor. This was found to be a fibroid, which had originated in the posterior wall of the womb, and had finally become inseparably blended with that organ. There were no adhesions, and the ovaries were not diseased. The supravaginal cervix was tightly held with a clamp-shield, and a large needle, threaded with a double silken cord of eight strands, well waxed and carbolized, was passed from before backwards through the neck, each lateral half of which was ligatured separately. The uterus was then cut off and removed, together with its tumor and its natural appendages. The shield was taken away, and immediately quite profuse hæmorrhage occurred on each side of the stump. The reason of this was that the shield had so flattened the cervix antero-posteriorly that, when the latter was released, its elasticity permitted it to partially resume its former shape; and the ligatures, having less to hold, loosened and allowed the broad ligaments to slip away from the cervix, against which the cords had held them. A large catgut ligature was tied around the stump outside the silk, and the bleeding vessels at the sides were secured with small catgut. The wound was closed with silver sutures, and the dressing applied. The Lister method was faithfully followed from first to last. The time consumed was one hour and a quarter. The mass removed weighed 6200 grams (twelve and a half pounds).

During the operation the pulse flagged at times, and brandy was given hypodermically. When the patient was placed in bed, her breathing was so bad that dissolution seemed imminent; but in an hour she rallied, came out from the influence of the ether without nausea, and by evening her pulse was 100 and of fair strength, and her respirations had come down from 52 to 16. She got through the first forty-eight hours very comfortably with the aid of anodynes. The subsequent history presented nothing startling, and can be sufficiently told in a few words. For several days the stomach was irritable and could bear hardly any food; the bladder gave great annoyance for awhile; external hæmorrhoids developed and caused much distress for ten days. The stitches were all removed on the eighth day. Every part of the incision had healed by first intention. Straps of adhesive plaster were applied to guard against reopening of the wound by any strain. The bowels were moved on the ninth day without causing much suffering. A few days after the operation an ecchymotic spot appeared in each ham, and was succeeded by a large irregular ulcer, which had a phagedenic tendency. Astringent ointments afforded little relief, but the Lister dressing worked admirably. Considerable morphine was needed to control the abdominal pain, which was quite severe at times. The temperature never rose above 38.6° C. (101.5° F.). She gained strength very slowly, but a month after the operation she was sitting up a little every day, and the thermometer never afterwards marked higher than the normal. The silk ligatures were found protruding from the os uteri, and were removed on the seventy-seventh day, and the patient was discharged on the 25th of July.

I visited Mrs. W. at her home in Androscoggin County on the 10th of June, 1882. From her I learned that, with the exception of the first week after she left the hospital and a fortnight last winter, when she was sick abed, she had done all the woman's work on a small farm without assistance. At the time of my call she had just completed a three-hours' churning. Sometimes she has had considerable pain, but all her discomfort may be attributed fairly to overwork. She eats well, sleeps well, and generally feels well. Sexual congress is somewhat painful, and there is no desire; though in this latter respect she is not materially, if at all, changed by the operation. There has been no menstruation, or anything even remotely suggestive of it. Examination showed that the stump of the cervix had atrophied, and that there was nothing about the parts to indicate the existence of inflammation at any previous time.

This case is interesting to me mainly because of the complete recovery from the operation without profound shock, with no secondary hæmorrhage, no peritonitis, no septicæmia. The escape of the silk ligatures is worthy of consideration, since, if this were to occur usually, the operation would be approached with much less dread.

In conclusion, I wish to put on record my appreciation of the services of Dr. Charles D. Hill, then the surgical house-pupil at the hospital. During the period of greatest danger he was almost constantly by the patient, observant of every symptom, and quick to meet every want as it arose. Such fidelity deserves an honorable share in the credit of the successful issue.

Case II. R. F. W., twenty-nine years old, tall and spare, came under my care on the 18th of October, 1881, with the following history: Seven and three fourths years previously she was married, and nine months thereafter her health, which had formerly been good, began to fail. There was no acute sickness, but a constant feeling of languor and debility. Four years ago she commenced to have pain quite constantly. Up to that time menstruation, which was established when she was sixteen, had always been normal; but since then the flow of blood has been steadily diminishing, till, at the last period, there was none, and the suffering has greatly increased, the pain always being low down on the right side. There has been no irregularity in the time of the catamenia, but of late they occupy half the month, and she hardly recovers from one attack before she is prostrated by another. She has never been pregnant, and has never had any hæmorrhages between the periods. A lump in the abdomen on the right side was first noticed a little more than two years ago, and has grown gradually. Pain in the back is constant, and at times there is profuse leucorrhœa. Examination showed a tumor at the right of the uterus, apparently solid and quite movable. The womb was movable, and measured but little more than the normal. The enlargement of the abdomen was slight. Her general health had steadily failed, and an operation seemed to offer the only chance for relief from the continual suffering which was slowly but surely killing her.

At eleven o'clock on the 20th of October I performed the operation at the Maine General Hospital, in the presence, and with the assistance, of Drs. Gordon, Small, Thayer, Pendleton, Fernald, and Palmer, of this city, and Burroughs, of Saccarappa. The patient was anæsthetized with ether. Listerian precautions were attempted, but the spray gave out before the closure of the wound. The incision was median, beginning a little below the umbilicus, and extending downwards 12.5 centimeters (five inches). The tumor was found to be a fibroid, irregularly nodulated, rather larger than a child's head at term, attached to the fundus uteri by a short pedicle, but without adhesions to other parts. The left ovary was somewhat enlarged and pulpy; the right showed some cystic degeneration.

Four methods of proceeding at once suggested themselves: to close the wound without further interference; to remove simply the fibroid; to ablate the ovaries with the tumor; to amputate the uterus with all its appendages, normal and abnormal. The first was instantly rejected, as life was such a burden to the woman that she would prefer the risk of any operation which offered a chance of recovery to continuing as she had been for years; the second was decided against because it would leave her in probable need of ovariotomy at some future time, if she survived this dangerous procedure; the third and fourth would put her in substantially the same sexual condition, and were perhaps equally perilous; but the happy termination of the former case, and the fact that the ligatures were finally got rid of through the vagina, determined me to amputate the womb.

The cervix was, therefore, transfixed antero-posteriorly with a large, dull needle, which carried a double cord of six strands of waxed silk, well carbolized; each lateral half was tied by itself, and the section was made at the cervico-corporeal junction. After waiting a few minutes to see if there were need of any further ligation of vessels, and finding none, the ends of the cords were cut off, the pedicle was dropped into the pelvis, the wound was closed with silver sutures, and the usual antiseptic dressing was applied.

During the operation, which lasted three quarters of an hour, the patient's pulse varied little from 85, was full and strong. She recovered from the ether slowly, but had no nausea. At six o'clock the pulse began to rise, and soon after eight reached 130; emesis occurred at short intervals, and the extremities grew cold; but the patient was nearly free from pain and calm, being allowed to have no suspicion of her peril. Brandy was given by the rectum several times during the night, and hypodermically every half hour, two grams (thirty minims) at a dose. Dry heat was applied to the body and limbs, and ammonia was given by inhalation. Some time before a local practitioner of repute had created some stir in the profession of the city by his assertion that he had revived a patient, who was thought by several leading physicians to be dying of "cerebral paralysis," by hypodermic injections of phosphoric acid. Without the smallest faith in the alleged remedy, and in despair of seeing my patient rally, I decided to try the experiment, in which I could see no harm. So, at about three in the morning, I began giving one gram (fifteen minims) of the dilute acid, with an equal quantity of water, subcutaneously, fifteen minutes after each hypodermic of brandy. For some hours no appreciable effect was produced; but about seven o'clock, immediately after a dose of the acid, the circulation began to grow stronger, and all the symptoms steadily improved, until, at four in the afternoon, the pulse was only 85, and the condition was in all respects correspondingly favorable. Up to this time she had received seventy-two grammes (two ounces, two drachms) of brandy under the skin, about sixty-two grammes (two ounces) by the rectum, and twenty-four grammes (six drachms) of dilute phosphoric acid. She was fed cautiously with milk and lime water and iced champagne, and passed the second night very comfortably.

On the third day the stomach was irritable, and rectal injections of beef, brandy, and ammonia were given.

The fourth and fifth days were free from disquieting symptoms, except that the temperature ran up to 38.5° C. (101.3° F.). Less than three centigrams (half a grain) of morphine had sufficed to relieve all pain up to this point.

At the end of six full days the stitches were all removed, the abdominal wound being healed completely. At one suture-puncture there was a single drop of pus, but there were no signs of inflammation in or about the wound. Broad straps of rubber adhesive plaster were applied to the belly, beginning close to the vertebral column on one side, and going round in front nearly to the starting-point.

There was urgent desire to defecate; the temperature reached 38.7° C. (101.7° F), the pulse 109, and both continued to rise on the seventh day, and abdominal distress became so marked that it seemed best to risk a movement of the bowels. Accordingly, a cathartic of castor oil was given, followed by citrate of magnesium, and a copious but painful dejection resulted. In a few hours the temperature dropped from 39.2° C. (102.6° F.) to 37.7° C. (100° F.), the pulse from 114 to 100, and the patient slept nearly all night. This amelioration of symptoms was so marked that I was inclined to think that the febrile condition had been due to the constipation and not to blood-poisoning, as I had feared; but the next day the mercury was pushed up to 39° C. (102.2° F.), the pulse beat 106 in the minute, and from this date for more than four weeks the temperature at some hour in each day was as high as 38.2° C. (100.7° F.), on seventeen days touching 38.9° C. (102° F.) or more, and once, on the twenty-eighth day of treatment, reaching 39.6° C. (103.3° F.). Occasionally the early morning observation would show a fall of a fraction of a degree below 37.7° C. (100° F), but for weeks this was exceptional. The heart's action was usually proportionate to the body-heat.

At the opening of the tenth day, exactly four weeks from the commencement of the last menstruation, a bloody vaginal discharge appeared, and this continued for above three weeks, at times being more profuse than she had experienced for many months, at others so scanty as to be hardly noticed. Its character also varied, at first being like diluted menstrual blood, then dark, thicker, and offensive in odor, and finally degenerating into a distinct leucorrhœa.

On the tenth day, too, the patient became jaundiced, and in two days more the abdominal pain was very marked in the region of the liver. The icterode appearance remained until convalescence was established.

The left parotid began to be painful and swollen on the twelfth day, and, twenty-four hours after, its fellow followed suit. The inflammation in these glands progressed slowly, but after ten days the swelling was so great as to permit only a slight separation of the teeth. In two weeks the left parotid showed fluctuation, and was opened; the right suppurated more slowly, and did not demand operation till nearly a week later. The pus from these abscesses was laudable throughout.

Only one of the multitude of hypodermic punctures gave any trouble, and that was at a point where brandy was inserted the first night. An abscess formed slowly on the outer aspect of the right thigh, near the knee, and was opened on the nineteenth day. A portion of the integument nearly as large as a silver half dollar sloughed, leaving the muscular tissue exposed. The resulting ulcer was very indolent.

From the beginning of the second week, when the septic symptoms became pronounced, for a full month the patient's condition gave rise to the most gloomy forebodings. The bowels were a source of constant anxiety; if they were not moved by injection every second day serious symptoms arose, and yet the movement gave so much distress as to be dreaded both by patient and attendants. Besides, the rectum was greatly needed for nutrient and stimulant enemata, by which she was sustained in large part for weeks. However, the rule of giving a cathartic injection every other day was closely observed. Digested beef juice, brandy, and quinine were administered by enema at as short intervals as the rectum would tolerate, and concentrated nourishment was given cautiously by the mouth in such quantities as the stomach would bear. Sometimes for a day or two complete rest from food was given the latter viscus, a course necessitated by its very irritable condition.

The twenty-fifth day was marked by the first of a series of peculiar attacks, characterized by an effort to expel flatus from the stomach, by abdominal griping and by choking, so severe as to give the patient an impression of impending death. Occasionally she was delirious for hours together. The pulse would at times become almost imperceptible, and more than once her attendants thought her expiring. But she always rallied, and after ten days of this harrowing experience had no further attacks of the kind. It is probable that some, perhaps much, of this state was due to hysteria.

After the forty-fourth day from the operation the temperature did not rise above the normal, the pulse stayed below ninety, and the stomach ceased from troubling. The patient was discharged, weak, but in good spirits and fair condition, on the 14th of December.

In the preceding account I have said but little of the details of after-treatment. It may be summed up in a few words. Morphine was given as indicated by the condition of the nervous system; it acted remarkably well, a minute dose generally sufficing to relieve pain, quiet restlessness, and produce sleep. Large quantities of brandy were given, the spirit being well borne, and evidently needed in the absence of power to take ordinary food. About 6750 grams (thirteen and one half pints) were administered in thirty-five days. Quinine was given almost daily in full doses for its antipyretic and antiseptic effects. The gastric difficulty was extremely intractable; numerous drugs were exhibited, but very little good effect was apparent from the use of any excepting hot brandy and soda mint. Suitable cathartics were given as was necessary. The abscesses of the parotids were poulticed; so for a while was the ulcer on the thigh, to which, after the slough separated, the Lister dressing was applied with gratifying results. Vaginal washes were used daily after the discharge became offensive.

On Mrs. W.'s return home in December, she came under the care of Dr. Albert H. Burroughs, of Saccarappa, who has managed this difficult case with great skill and discretion. From notes which he has kindly furnished I gather the following facts: —

Everything progressed favorably for six weeks after her arrival home. Then she was seized suddenly with alarming symptoms, which continued some days, and ever since, at intervals of almost exactly four weeks, she has suffered from peculiar attacks, which differ from each other, but are alike in the fact that they result obviously from some profound perturbation of the nervous system. Thus at one time there were unconsciousness, tympanites, a temperature of 40° C. (104° F.), a pulse of 130; at the next, rigors, vomiting, pain in the right shoulder, a temperature of 40.5° C. (105° F.); the following month, pain in the left groin, succeeded by incessant emesis; at the next period severe pain through the back and hips; and the last epoch was characterized by a number of days of utter mental blank.

On the 7th of June I visited Mrs. W. to observe her present condition. Examination showed the cervix, which was somewhat enlarged before the operation, reduced to its normal size; a dense, thick mass of plastic material above the vaginal roof, holding the cervix immovably in position; and a good deal of tenderness in all this region. She is far from strong, her appetite is poor and variable, and she cannot stand quite erect without having a severe, pulling pain in the pelvis. There is considerable leucorrhœa

The ligatures were discharged through the vagina a few weeks after she left the hospital; the time from the date of operation was not exactly noted by her nurse, but was not materially different from that in Case I.

The points of particular interest to me in this case are the following: —

The recovery, especially considering the severe blood-poisoning.

The escape of the ligatures through the vagina.

The flow of blood from the vagina (and cervix?) on the day when menstruation would probably have occurred if the operation had not been performed.

The grave nervous disturbance at each succeeding month, as if the system could not abandon the habit of thirteen years' duration without repeated and violent protests.

The possibility that the hypodermics of phosphoric acid had a favorable effect in restoring the flagging heart.

Finally, I should do a gross injustice were I to withhold my public acknowledgment of the very valuable assistance rendered in this case by Dr. Walter E. Fernald, at that time surgical house-pupil at the hospital, and Dr. Sarah Ellen Palmer, of this city. The former was so assiduous in his devotion to his trust, that, after three weeks of hard work by day and broken rest at night, his health required a respite from the confinement; and an able substitute was found in the latter, who most skillfully cared for the patient for more than a week of nights at the most critical and trying period.

I have never seen a case which more plainly owed its favorable result to unremitting, intelligent after-treatment, and I am better satisfied than ever before that the most brilliant operation may avail little if it is not supplemented with good nursing.

PORTLAND, MAINE, *June*, 1882.

MEDICAL EDUCATION IN JAPAN IN 1882.

BY J. C. CUTTER, M. D., KEN HOSPITAL, SAPPOW, JAPAN.

IT is undoubtedly true that the cultivated people of the present time are more interested in Japan than in any other country as yet so little known. It has a civilization entirely different from that of the Occident and yet dissimilar to that of other countries of the Orient. Japan is proud of her former civilization, and yet, since 1868, she has made, and is making, great efforts to adopt and to assimilate the more salient and more adaptable modes of that of Europe. She is endeavoring to absorb and to make her own in the space of a few decades that civilization which has cost Europe centuries of struggle and effort. She does not imitate the slow and certain course followed by the Chinese, but her ruling classes have launched her boldly into the sea of modern effort and struggle, hoping that she can hold her way, and in the end attain a high position among the nations of the future.

In medicine, Japan enters the race furnished with the accumulated stores of knowledge and experience of the West. She has during the past quarter of a century employed able men from the West in her hospitals and at the centres of medical instruction — Nagasaki, Osaca, and Tokio. She has established a well organized, well equipped, department of medicine in the University of Tokio. She has received with alacrity the latest and best products of the mechanician's art to assist in investigation, instruction, and to aid in the amelioration of disorders admitting of surgical interference. She has had translated and published in a cheap form text-books on all the leading branches of the healing art. She has educated, both at home and abroad, a large number of men in English, in German, and in French, so that to them the medical literature of Europe and America is no longer a sealed book. Thus far Japan has only been receptive. It is yet too early to expect reliable and valuable work from her medical staff in advancing the cause of modern medicine.

DAI GAKU I GAKU BU, OR THE MEDICAL DEPARTMENT OF TOKIO UNIVERSITY.

In 1871, Drs. Hoffmann and Miller of the Prussian service were employed by the Japanese Government to organize a medical school after the most approved Western ideas. A course of study — advanced and preparatory — was elaborated and presented to the ministry. The next year this received official approval, appropriations were made, books, apparatus, and means of illustration ordered in Europe, and work on the needed buildings commenced at once. Before the coming of Drs. Hoffmann and Miller, it had been the purpose of the government to employ the English language in the medical department. It was now determined that the language of the advanced course should be German. German professors and instructors for the several departments were imported, and at the same time twelve promising young men were sent to Germany at the government expense to study medicine and allied branches, and to fit themselves for positions in the faculty of the "I-Gaku-Bu." Thus equipped and provided for, the "I-Gaku" commenced its educational work in 1872 and 1873. In 1875 the faculties of the schools established at Nagasaki and Osaca under Dutch auspices were called to Tokio, and these provincial schools were abolished. In 1876 a new department was organized within the "I-Gaku" to give instruction according to Western methods in the Japanese language. In 1877 the new large and well arranged college buildings, the German planned hospital, the drug laboratory, and new accommodations for the growing out-patient department, all in Kaga Yashiki, were opened for purposes of instruction. In 1879 a large and commodious hospital, called "Shitataya Bio-in," was opened in Tokio for clinical instruction of the Japanese section of the school. The medical department of the University attracts the largest number of students. Thus in 1880 there was in the law, science, and literature sections, together, 238 students, and in the medical, 1040. In the former departments a conversational knowledge of English is demanded; in the latter, in the advanced division, German; in the second section, Japanese and Chinese; hence the medical department would naturally have the largest number of matriculants. However, there is a larger number of students in the German-speaking section of the "I-Gaku" than in any one of the English-language-speaking sections of the University.

THE GERMAN-LANGUAGE-SPEAKING SECTION OF THE "I-GAKU."

To enter the preparatory department of this section, the student must be at least twelve years of age, must be well grounded in Japanese, must have commenced Chinese, and must have spent one year in the Foreign Language School, or have received an equivalent instruction. He (for no females are permitted to study in the University medical course) now enters upon a five years' course of German, a long course of Chinese and Japanese, a certain amount of Latin, as well as extended courses in mathematics, and elementary chemistry, physics, botany, and zoölogy. In this school there are annual examinations, all of which must be passed in due order. After passing a stringent written and oral examination in all the branches pursued, he is permitted to advance into the medical school proper. He continues German, and enters upon thorough study of chemistry, physics, zoölogy, and botany. Thus prepared he takes up and follows a *graded course* in *all* the branches of study required in the best medical schools of Europe. The instruction is given by recitations, by lectures, by demonstrations, by laboratory work, and by practical clinical work under the supervision of the instructors. This course extends over five years. There are annual examinations, and no student is permitted to advance until he is pronounced satisfactory in a majority of the studies of the year. If he fails in the May examination in certain branches, he is permitted to go up to that of November. At the end of the five or more years' course there is a prolonged oral, written, and clinical examination embracing all the branches of the course. In the final examination, the third failure in any branch admits of no re-ëxamination. The degree granted is called "I-Gaku Shi," and its possession in Japan has a deeper, more valuable significance than the easily acquired M. D. of the majority of the American schools. It carries with it a rank, a prestige unknown in the United States.

Thus far less than one hundred and fifty have received this degree. As soon as graduated a man is eligible to a government salary of one hundred and fifty yen per month, and may enter the army, navy, police, or home service. This is a very high salary in a country where the majority in the services receive less than thirty yen per month, where the chief medical officer of Yezo only receives two hundred yen per month, and the Medical-Inspector General of the Army draws but two hundred and fifty yen per month. Of the early graduates, a few of the favored men were sent to Germany, at the government expense, for a series of years to pursue advanced studies. The army and navy welcome the "I-Gaku Shi," but the majority prefer the civil service. Those in the latter service are sent to the principal Ken towns of the Empire to manage the hospital service and to act as medical advisers of the Ken officers. These medical men have an assured income, an enviable official rank, a social prestige, and a chance to advancement through transfers to larger and more eligible cities with the increased emoluments incident thereto. Private practice, except among the nobles and the wealthy merchants of Osaca and Tokio, is not remunerative. Most of the people go to the out-patient departments, receive gratuitous advice, and buy their medicines. It was the custom in old Japan, and is now almost universal, to pay the doctor not for his time, efforts, and skill, but for the drugs received. Then at the termination of the malady to send him a "Shinjo-mono" — as, a box of confections, a piece of lacquer, some food, a small roll of silk — as an expression of gratitude. Hence, as money is an article of necessity in modern Japan, all young men desire to enter the government service where the position is secure (for it is rare that a man is discharged for incompetency in Japan's service — he is only transferred to another place, retaining his rank and salary), and the salary certain.

JAPANESE-LANGUAGE-SPEAKING SECTION OF "I-GAKU."

To enter this department the candidate must be at least eighteen years of age; must be able to pass a creditable examination in Japanese and Chinese composition, in mathematics through geometry, elementary chemistry, physics, botany, and zoölogy. The medical course is four years. The order of studies is similar to that of the German course, but the studies are not pursued so thoroughly or so extensively. There is more of lectures, note-taking, and text-book work, and much less of laboratory and clinical work, proportionally to the time, than in the German section course. At the end of the *second* year there are examinations in anatomy, histology, and physiology; of the *third* year in surgery, pathology, and therapeutics; and of the *fourth* year in obstetrics, practice, ophthalmology, and clinical work. Of the large numbers who enter this department, but few, comparatively, continue through the course. The majority attend the lectures and instructions for two or more years; spend much of their energies in the gayeties of Tokio life; do not attempt the examinations; secure a certificate of attendance; procure the title of "Kwan-I" (Chinese doctor), and then from the Ken officials gain permission to practice in a certain district. Such men are known among the better class of students, and the better educated officials, as "Yabu," that is, Bamboo shoots.

In 1881 there was in the "Dai Gaku I-Gaku Bu" of government cadets, 21; scholarship cadets, 100; private students, 1055. Total, 1176. During the years 1880 and 1881, 384 were admitted, 239 expelled, 13 died, and 99 were graduated (German and Japanese sections included). The staff consisted of German professors, 10; Japanese professors (Kojiu) 5; Japanese instructors (Jokiu) 6; dissectors and assistants (Kio-in) 15, and 16 clinical clerks in the hospitals. The government cadets are educated, housed, and clothed at the expense of certain departments of the government, as of army, navy, police, and are mostly to be found in the German section. The expulsions were almost entirely in the Japanese section, and were, in the main, for dissolute conduct, intemperance, and inattention to duties.

PROVINCIAL SCHOOLS OF THE FUTURE.

On May 27, 1882, Fukuoka, Minister of Education, issued a notification destined to have an improving influence on medical education in Japan. Since the abolition of the Nagasaki and Osaca schools, an approximately thorough course of medical instruction could only be acquired at Tokio, and there only could the degree of "I-Gaku Shi" be attained. All students who could not study in Tokio were compelled to follow a desultory course of study in some provincial hospital, with attendant serious disadvantages. Such men could not receive a degree enabling them to advance to a lucrative government position. They could only secure a certificate from the Ken officials permitting them to practice certain branches of medicine in that prefecture, or Ken. Such medical men could rarely advance beyond a thirty yen monthly stipend. The expenses of the long journey, and of long residence in the capital, prevented the poor but ambitious students of the distant Kens from acquiring more and better instruction.

Summary of Mombu-Sho notification No. 4. Medical institutions may be established in the Empire according to the following regulations: The medical schools shall be of two classes: Class A — those which can give that amount and kind of instruction enabling its graduates to enter at once upon independent practice. Class B — those which can give only cursory instruction in medicine adapted to men of advanced age, or where it is impossible to establish a school of Class A. Each school must have a hospital connected therewith. Schools of Class A must give instruction in physics, chemistry, zoölogy, botany, anatomy, histology, physiology, pathology, surgery, obstetrics, hygiene, diseases of the eye, medical jurisprudence, and medical and surgical clinical work. The faculty shall consist of not less than three "I-Gaku Shi," from "Tokio Dai Gaku," or of men of as good scholarship as an "I-Gaku Shi," appointed under special permission of the Minister of Education. The course shall extend through four years; there must be thirty-two weeks of instruction annually, and there must be at least twenty-four hours' school exercises per week. Candidates for admission must be of excellent character, in good health, and at least eighteen years of age. They must pass satisfactory entrance examinations in Japanese and Chinese composition, in mathematics, and in elementary chemistry, physics, botany, and zoölogy. Schools of Class B shall give instruction in physics, chemistry, anatomy, physiology, therapeutics, surgery, pathology, obstetrics, diseases of the eye, and bedside instruction. The faculty shall include at least one "I-Gaku Shi." The course shall extend over three years. The hours and weeks of instruction shall be the same as Class A. Candidates for admission must pass satisfactory examinations in Japanese and Chinese composition, arithmetic, and physics.

OKIYAMA KEN SCHOOL.

The hospital medical school at Okiyama, Ken of Bizen, near the Inland Sea to the west of Osaca, was the first one of the hospital schools to take advantage of this notification. In the future its graduates can practice in any part of the Empire without passing the Ken examination, as called for in the notification of 1876. This school has in its faculty four "I-Gaku Shi" and one graduate in pharmacy. It has a hospital of eighty-five beds. Upwards of two hundred students were present during the session of 1881–1882. These men come from the thickly populated country to the west and south of Kiyoto, from Kiushiu, and Shikoku. It is the most flourishing of the Ken Hospital Schools.

The Japanese medical press speak in enthusiastic terms of the May notification, and of the good which will result not only to the profession but to the people among whom a better educated class of practitioners will settle. The Chinese school of practitioners, though they have no school recognized by the government, and though their members are allowed to practice only under special rules of the Home Department, yet hold their own in point of numbers, but not their per cent., as regards the population. The class of practitioners having the merest smattering of knowledge of Western medicine is rapidly enlarging. The class of those who possess a fair preparation for medical work is steadily increasing, but that of those having the rank of "I-Gaku Shi" is very small and, proportional to the population, is increasing very slowly. Though the number of the latter class is small, yet are they having potent influence in Japan in the advance of education, of sanitation, and of the standard medical work.

NOTES ON PROGRESS IN PHYSIOLOGICAL CHEMISTRY.

BY JOSEPH W. WARREN, M. D.

ONE of the most suggestive of recent articles in this department is that of Loew and Bokorny[1] on A Chemical Difference between Living and Dead Protoplasm. On a previous occasion Loew had discussed the constitution of albumen, calling to mind anew the distinction, not long before insisted upon by Pflüger, which must always be made between the living albumen of the tissues, of the cell, and the proteid bodies presented to us by our analyses. He had suggested the theoretical possibility of arriving at the simplest formula for albumen ($C_{72}H_{112}N_{18}SO_{22}$) by a series of condensations of the aldehyde of aspartic acid, — a process capable of indefinite extension and admitting of unlimited polymerisation. The arguments by which he makes this suggestion plausible need not be given in detail here. Assuming the aldehydic character of the structure it seemed not unreasonable to attribute the activity of living protoplasm to the potential energy of these extremely mutable aldehyde groups whose decided alteration might perhaps explain the death of the albumen. Remembering the characteristic readiness of the aldehyde group in reducing weak solutions of silver, the use of this reagent for testing the hypothesis was next undertaken, and with very interesting results.

---

[1] O. Loew and T. Bokorny. Ein chemischer Unterschied zwischen lebendigem u. todtem Protoplasma. Archiv f. d. ges. Physiologie, xxv., p. 150. Vide also the authors' résumé of this communication, with additions, in the Biologisches Centralblatt, i., p. 193.

The reagent consists of two solutions: one of silver nitrate (one per cent.), and another containing thirteen cubic centimetres of a potassium hydrate solution (specific gravity 1.333) and ten cubic centimetres of liq. ammonii caustici (specific gravity 0.964) in each one hundred cubic centimetres; one cubic centimetre of each solution, mixed and diluted to one thousand cubic centimetres, is used in the experiments, it being best to keep the original solutions separate. The most suitable objects seemed to be such cells as can be readily examined under the microscope, and have a membrane easily penetrated by the substances in extremely weak solutions. Certain algæ, and particularly *spirogyra*, proved most satisfactory. An examination of these cells showed, however, the presence of tannin and glucose, either of which is capable of reducing a solution of silver. Careful experiments proved that tannin (of which very little is present in spirogyra) does not reduce a silver solution containing not more than one part of $AgNO_3$ to 10,000 parts water. Glucose is more delicate, and causes a decided browning in silver solutions of 1 : 100,000, but this differs much from the blackness of a distinct reduction. In weaker solutions (1 : 1,000,000) glucose affects no alteration, even after many days, but moderately thick slices of cherries and apples do show a yellow or brown coloration after a few hours, yet without signs of a genuine reduction. If, however, the delicate filaments of spirogyra be placed for some hours in the reagent, light being excluded, a very different result is reached. The protoplasm is found to be intensely blackened, only a few cells being unaffected, or showing only a yellowish-brown discoloration of the liquid contents, caused, perhaps, by the glucose. If the reagent be much diluted, so that 1,000,000 parts contain but one part $AgNO_3$, the result is better yet, and even a dilution of 1 : 2,000,000 is still efficacious, but approaches the limit of usefulness. If the algæ are exposed to any influences which are known to destroy life and are then placed in the reagent, the reduction of silver does not occur.

It is unnecessary to note fully the numerous variations tried by these authors or the occasional unsatisfactoriness of the results, but possibly these can be improved by other and more careful variations. It is, for example, possible, in fact some of the experiments show it to be very probable, that a solution of silver just adapted to certain cells may be much too strong for others of a more delicate constitution, and kill them in some way before the reduction can occur.

It has long been a mooted question what form the assimilated fats assume when they become a part of the animal body. Lebedeff[1] reports that he has succeeded in demonstrating that the fat given in food can be stored up in an unchanged form. He experimented with two dogs, who were starved for a month, a time sufficient, according to other investigations, for the consumption of all their own fat. They lost forty per cent. of their weight. They were then fed on very lean meat, and received large supplies of special fats (linseed oil and mutton suet). Both animals increased in weight, and were perfectly well until they were killed, nor could any disturbance of the various organs be found. From the tissues of the dog that had been fed on linseed oil a large amount (more than one kilogramme) of a peculiar fatty oil was obtained, which remained liquid at 0° C. Its chemical behavior resembled that of linseed oil. In the tissues of the other dog a fat was found in large quantities which seemed almost identical with suet.

Another recent investigation of great suggestiveness is that of Schulz[2] on the decomposition of chlorides by carbonic acid, and the possibility of thus explaining the importance of these bodies in the healthy organism, as well as of furnishing a point of view concerning their action when used as medicine.

It is usually assumed that when we have a solution containing a base (B) and two acids, a stronger (A) and a weaker one (*a*), A will unite with B, leaving *a* in some sense to itself. For example, if we have an aqueous solution of sodium carbonate and a "stronger" acid, that is one which will "drive off" the "weaker" carbonic acid, say acetic acid, the acetate will be formed and CO_2 set free. This simple view is useful for instruction, and satisfactory for explaining the steps of analysis. But let us suppose for a moment that after our assumed *BA* has been formed the quantity of "free" *a* in the solution is greatly increased, greatly in proportion to the quantity of *A*; it is conceivable that such molecular changes shall take place as to reproduce *Ba*, leaving some *A* "free," which shall in its turn again act on *Ba* to regenerate *BA*, thus introducing a cycle of considerable complexity. Our chemical equations after all represent frequently only the final products as accessible to some forms of analysis, and do not necessarily state the actual condition of the compounds in the solutions with which we have to do. Even in the cases of simple solution, as that of NaCl in H_2O, it is by no means certain what relations the molecules bear to one another, whether those of NaCl lie in among those of HOH, as bullets may be poured in among cannon balls, or are associated with them in such a way as to form compounds (incapable of isolation, perhaps) which are neither NaCl nor HOH.

In this way we usually assume that when HCl is added to $Na_2\,CO_3$ or $NaHCO_3$ the result will be $NaCl + CO_2 + H_2O$ (in due proportions), and it has not been easy to understand how NaCl and KCl, which are so indispensable to the well-being of the organism, could exert any influence. Various investigations, however, have rendered it not unlikely that weaker acids, if present in sufficient quantity or under suitable pressure, are able to break up the combination of stronger ones with bases and set them free, at least temporarily. In this way it is not unreasonable to reverse some chemical equations, and to understand that there may be conditions where we can assume the reaction to be: —

$$NaCl + H_2O + CO_2 = HNaCO_3 + HCl.$$

If this hypothetical reaction could be verified it would be easy to see how hydrochloric acid may be formed in certain cells, and under favorable conditions pass as free acid or otherwise into other cells or into secretions, and thus the process of secreting an acid gastric juice from alkaline cells and fluids would seem much less of an enigma than it has been. Perhaps we shall not go too far astray if we suggest that herein may possibly be found an explanation of the so-called amphichromatic reaction of many fresh tissues, for our test-paper shows the reaction of an immense number of cells of which a portion may be acid enough at the moment to redden litmus, while their neighbors at the same moment are sufficiently alkaline to give a blue reaction.

---

[1] Lebedeff. Uebergang von Nahrungsfett in Gewebe. Original-Mittheilung. Ctbl. f. med. Wissenschaften, 1882, p. 129.

[2] H. Schulz. Die Zerlegung der Chloride durch Kohlensäure. Pflüger's Archiv, xxvii., p. 454.

That such a change of acids is possible Schulz seems to have demonstrated, reviving and extending some experiments of H. Müller made a dozen years ago. Müller had used ultra-marine blue as an indicator whose bleaching should demonstrate the presence of hydrochloric acid. Schulz found all the ultra-marine blue which was accessible to him very untrustworthy, and, finally, following the suggestion of Maly [1] chose methyl violet as his indicator. If a stream of CO_2 be conducted through a solution of a chloride (of the alkalies or alkaline earths) properly colored with methyl violet, the color grows paler, while the red is gradually replaced by blue. A comparison of the different chlorides was made by means of the absorption band in the spectrum. It is not necessary to give Schulz's experiments in detail, nor to explain the ingenious combination of boxes for examining the spectra of two liquids, which he has described in a late number of Pflüger's *Archiv*; [2] let it suffice to note his results: —

"(1.) The chlorides of the alkalies and alkaline earths in aqueous solutions are decomposed by carbonic acid even at a low (ordinary) temperature and under atmospheric pressure, the products being hydrochloric acid and carbonates.

"(2.) The capacity for decomposition varies in the chlorides, and is greatest in that of sodium.

"(3.) This behavior of the chlorides furnishes a simple although not the only explanation of the formation of free hydrochloric acid in the body.

"(4.) All that we know of the behavior of the iodides in relation to living-organized tissues as well as what experiments have shown concerning the influence of the chlorides upon such tissues justifies the conclusion that the chlorides, and particularly that of sodium, have a special relation to the action of oxygen in the tissues. It may be assumed as a principal reason for the presence and importance of the chlorides in the living organism that they are capable of giving off chlorine in the presence of living protoplasm, of thus indirectly causing oxidation.

"(5.) Thus is to be explained the peculiar ability of certain chlorides to produce increased tissue change, to quicken organic life, and to work as medicine when given in suitable quantity and under proper conditions."

The question of the cause of the different kinds of rigor in the muscle has been discussed anew, this time by Miss Schipiloff.[3] She sought an analogy between the changes of myosin in salt solutions and those of the myosin in the muscle. Particularly interesting are the comparisons between the *rigor mortis* and the *rigor caloris*. Myosin which is precipitated from its solutions by acids and by a small quantity of distilled water retains its chemical character, and does not change into syntonin nor into the insoluble modification; hence fresh muscles and those which have become spontaneously rigid must contain the same amount of myosin (if its changes cause rigor) which is found by experiment to be true. Again, myosin is precipitated from its solutions by heat, but the body thus obtained is no longer myosin, and is completely insoluble in NH_4Cl, hence the *rigor caloris* must be totally different from the normal spontaneous *rigor mortis*. "The *rigor mortis* depends upon a temporary precipitation of chemically unaltered myosin from its semi-liquid condition in the muscle plasma; this precipitation is caused by the post-mortal development of acidity, whose further increase brings about a resolution of the rigor in muscular tissues which have not yet become putrefied."

In two recent communications Schmidt-Mülheim makes known some interesting experiments concerning the albuminoid bodies of milk. The first of these [4] concerns itself with the proportions of casein and albumen both in fresh milk and in milk which has stood for some hours at the temperature of the body. It will be remembered that about thirteen years ago Kemmerich published some experiments which led him to infer that if fresh milk be kept at blood heat for some hours an increase of casein takes place at the expense of the albumen. Curiously enough there was no proportionality in the reported changes, yet the investigations of Kemmerich had never been carefully repeated. Schmidt-Mülheim's attention was directed to this point in the course of other work on milk, and he decided to investigate the behavior of the casein anew. He failed to verify Kemmerich's observations, finding in fact a distinct diminution in the quantity of casein without any special alteration in the amount of albumen. If we average his figures the following little table will make his results more intelligible: —

	Fresh Milk.		Same Milk digested at 40° C.		
No. of Exp.	Casein.	Albumen.	Time of Digestion.	Casein.	Albumen.
I.	2.39%	0.40%	10 h.	2.18%	0.42%
II.	2.21	0.8	24 h.	1.86	0.34
III.	2.65	0.43	6 h.	2.53	0.44
IV.	2.54	0.37	8 h.	2.29	0.37
V. a	2.42	0.36	12 h.	2.27	0.34
b	2.23	0.39		1.96	0.39

Experiment V. is a comparison of the first (a) and last (b) portions of the milk of one milking to test Kemmerich's declaration that the increase of casein is more noticeable in the latest milk, or, in other words, in that most recently secreted. Schmidt-Mülheim calls attention to some details of analysis which are, perhaps, worth noting here. In using Hoppe-Seyler's method for determining the casein, he finds it desirable to add a definite weak acetic acid instead of the indefinite "sehr verdünnte Essigsäure" of the Handbuch.[5] He mixes one hundred parts of water with two parts of *acid. acet. dil.* (meaning probably the dilute acetic acid of the German Pharmacopœia, which contains thirty per cent. of *acetum glaciale*), and finds eleven to eighteen cubic centimetres of this sufficient for twenty cubic centimetres of milk. The beaker should be washed with the filtrate, and not with distilled water. In determining the albumen it is desirable to add a little (five cubic centimetres) of this dilute acid to the boiling solution in order to produce a satisfactory coagulation. If the filtrate be further concentrated a fresh precipitate is obtained of albumen which would otherwise escape determination; the amount thus liable to loss is not inconsiderable, being frequently an eighth of the whole.

---

[1] Zeitschrift für physiologische Chemie.

[2] Archiv, xxviii., p. 197.

[3] Schipiloff. Ueber die Entstehungsweise der Muskelstarre. Vorl Mitth. Ctbl. f. med. Wiss., 1882, p. 291.

[4] Schmidt-Mülheim. Findet in der Milch eine Caseïnbildung auf Kosten des Albumins statt? Pflüger's Archiv, xxviii., p. 243.

[5] Hoppe-Seyler. Handbuch d. Analyse, 4te Auflage, 1875, p. 435.

In his other communication[1] Schmidt-Mülheim considers the determination of peptone in milk, and the conditions of its increase. It has long been known that milk contains other proteid substances besides casein and albumen; they have received various names (lactoprotein, albuminose, galactin), but recently they have been more clearly identified as peptones. The methods hitherto employed for the quantitative determination of this substance are unsatisfactory since they fail to readily isolate the peptone, or because the presence of other bodies, notably milk sugar, interferes with the analysis. Our author uses an old method which Salkowski has recently reintroduced, and finds that it gives trustworthy results. The solution (for example, milk) is first saturated with sodium chloride, and then a suitable quantity of acetic acid mixed with a saturated solution of NaCl (one volume of acid to five volumes of the NaCl solution) is added. This procedure precipitates the casein and albumen and leaves the peptone undisturbed. The peptone is then precipitated with phosphoro-tungstic acid, washed with hydrochloric acid, dissolved in a weak solution of sodium hydrate, and then determined by a colorimetric method, which will be given below. The results of the experiments (xi. to xvi.) may be tabulated as follows: —

	A. Fresh Milk.			B. Milk digested at 40° C.			
No. of Exp.	Casein.	Albumen.	Peptone.	Time.	Casein.	Albumen.	Peptone.
I.	2.385%	0.39%	0.115%	10 h.	2.185%	0.42%	0.275%
II.	2.59	0.37	0.15	8 h.	2.50	0.36	0.19
				10 h.	2.35	0.38	0.28
III.	2.645	0.435	0.085	6 h.	2.535	0.44	0.135
IV.	2.585	0.375	0.12	8 h.	2.295	0.37	0.275
				—[1]	2.34	0.285	0.235
V. a[2]	2.40	0.36	0.14	12 h.	2.25	0.35	0.26
b	2.22	0.39	0.205	12 h.	1.955	0.39	0.345
VI.	2.235	0.30	0.135	24 h.	1.865	0.34	0.33

[1] After standing for some hours at about 17° C.
[2] a and b: the first and last portions from the same milking.

A comparison of these figures shows a decided increase in the peptone, and a diminution of the casein, but not in due proportions, so that the formation of other bodies from the casein is not unlikely. The increase in peptone seems due to the presence of some ferment, for milk which was boiled before being allowed to stand for some hours at 40° C. showed no such increase. This ferment is not destroyed by the addition of salicylic acid or phenol in suitable proportions, and its identity with pepsin could not be satisfactorily demonstrated.

A few words concerning Schmidt-Mülheim's method for the colorimetric determination of peptone may not be out of place here. He published it a couple of years ago in Du Bois-Reymond's *Archiv für Physiologie*, but calls attention to it now since some slight modifications have led to its being attributed to Hoffmeister.

He uses the red color which a solution of peptone assumes on the addition of sodium hydrate and cupric sulphate. To make a standard solution a convenient known quantity of peptone is taken and dissolved in water. To this solution sodic hydrate is added, and then a weak solution of $CuSO_4$ until the wine-red color begins to change into blue, whereupon the entire mixture is diluted with water so that three thousand cubic centimetres contain exactly one gramme of peptone. To determine the amount of peptone in a given liquid (from which other proteids have been removed) a small amount of sodic hydrate is added, and then just enough $CuSO_4$ to bring about the change from wine-red into blue, as in preparing the standard solution. This being done measured quantities of each are brought into little glass boxes with perfectly parallel sides, standing in a good light and against a white background. Over these boxes are burettes from which water is allowed to drop until the colors of the solutions to be compared are identical, after which a simple calculation gives the amount of peptone present. This method has, of course, all the objections of colorimetric methods in general. Schmidt-Mülheim found its extreme error to be ± six per cent.

Reports of Societies.

THE AMERICAN GYNECOLOGICAL SOCIETY.

THIS Society held its seventh annual meeting in the hall of the Boston Society of Natural History, September 20, 21, and 22, 1882. Two sessions were held daily for the reading and discussion of papers, and the subjects presented at each session followed in the main the programme as heretofore published in the JOURNAL.

FIRST DAY. MORNING SESSION.

At the opening session seventeen Fellows of the Society responded to their names. The members of the Boston Obstetrical Society and about thirty other gentlemen were named as guests of the Society during the present session, and invited to participate in the discussions and attend the social meetings of the week. A good representation of the medical profession in the vicinity was also present at most of the sessions.

The President, DR. EMMET, of New York, was in the chair, and DR. CHADWICK served in his capacity of secretary.

ADDRESS OF WELCOME.

DR. LYMAN, one of the vice-presidents of the Society, gave the address of welcome, in the absence of Dr. Storer, upon whom that duty would have devolved had he been well. After extending the formal greeting on behalf of the Boston members of the Society, Dr. Lyman spoke briefly of the twofold design of the organization, scientific and social, and alluded in a pleasant vein to Boston's historic importance as the scene of various gatherings of all sorts from the original Boston Tea Party down to the present day. He criticised the tendency to narrow too much the bounds of specialties, as when one man treated only the urethra, another only the rectum; but congratulated the Society on having done so much to develop the knowledge of women's diseases upon a broad scientific foundation.

---

[1] Schmidt-Mülheim. Beiträge zur Kenntniss der Eiweisskörper der Kuhmilch. Pflüger's Archiv, xxviii., p. 287.

The first paper read was by **Dr. Joseph Taber Johnson**, of Washington, D. C., and was upon the subject of

THE PROPER USE OF ERGOT IN OBSTETRICS.

The writer enumerated some of the many indications which from time to time since the introduction of this drug into obstetric practice by Dr. Stearns had been believed to exist for its use, as to hasten slow pains in first and second stage, to bring on labor, for threatened abortion, placenta prævia, etc. The action of the drug on the uterus was described as a persistent tonic contraction, finally becoming tetanic. All the fibres are equally contracted, whereas in a normal labor there is a repeated shortening and lengthening of the long fibres, while the circular ones are relaxed over the presenting part. If by chance the child is expelled under ergot it is because, everything being in readiness, the fundal muscles have contracted a little the first. The contraction under ergot lasts for hours, and the child is compressed equally on all sides. Not only is the placental circulation, which ought to go on in the intervals of the pains, checked, but a strong pressure is brought to bear on the head and chest of the child, which by its continuousness may be fatal. Again, it is the intermittency of the contractions which prepares the passages for the transit of the child, and if they are not so prepared various ill effects, from a minute fistula to an extensive sphacelus, may result, — these results being due more to continuity of pressure than to length of time. Moreover, the sudden expulsion of the fœtus through unrelaxed passages may cause all sorts of rupture from that of the uterus to that of the perinæum. Ergot is uncertain in its action, and may affect any part of the uterus solely, sometimes causing the hour-glass constriction.

To illustrate the large number of still-births ascribable to this agency, three cases were detailed, in each of which ergot was exhibited to dilate the cervix on the failure of uterine pains, from sixteen to twenty hours after the beginning of labor. In each case the child was known to have been alive at the beginning of labor, but all were still-born, and one had a bright red band, evidently due to constriction, about the head.

Various authorities were cited among those who first sounded the note of alarm regarding ergot. In 1850 the Academy of Medicine of Paris appointed a commission, who reported the danger from compression and narcotism. In accordance with this report, three years later the Academy voted against its use, except in miscarriage, hæmorrhage, etc. Subsequently Chapman showed that an "ergot-pain" was fatal to half the children if continued an hour. Thanks to present medical instruction the administration of ergot to dilate the os is rare among educated physicians, but the large number of still-births reported by midwives, and the fact that they all carry their ergot bottle in their pocket, shows that much damage is done by this class of accoucheurs. The writer thought that a few indictments for infanticide might have a salutary effect on these persons. The use of ergot was discussed and condemned in abortion with retained placenta, when it acted mischievously by locking up the secundines. As a routine treatment against post-partum hæmorrhage it is unreliable, taking from fifteen to thirty minutes to act; moreover, it often causes vomiting, and if the patient is weakened by hæmorrhage it is not absorbed even if retained. Subcutaneous injection is the only method of administration which is reliable. In threatened abortion and accidental hæmorrhage ergot is useless. With primiparæ it is dangerous. If dilatation is complete in a multipara, the soft parts relaxed, there is no obstruction to the birth, and the attendant is sure that a few more pains are all that is wanted, he may give it cautiously, with the understanding that if the birth does not occur in a half hour the forceps shall be used. With this rare exception ergot should never be employed unless the uterus be empty. Viewing the use of ergot as a whole, the reader thought the race would be better off without it altogether.

Dr. Reynolds in opening the discussion said that the abuse of ergot was due to disregard of instruction rather than to lack of it. He agreed with the reader as to his general rule not to use ergot till the uterus was empty, but in exceptional cases might employ it in the second stage there being no obstruction to a speedy delivery, and observing all the precautions which the essayist had laid down. In such cases small doses (five to ten drops) repeated often would soon show whether the action was to be favorable. The speaker alluded to the change in practice since a few years ago when a practitioner in a town near Boston said that himself and one other man did all the obstetric work of the town, one delivering with ergot the other with forceps. For subcutaneous use the speaker preferred Bonjean's ergot, administered in equal parts of glycerine and water, by deep injection. As a routine treatment he gave ergot whenever an anæsthetic had been used, his experience being that under such circumstances the tendency to post-partum hæmorrhage was increased. For the first two or three hours after ergot the after-pains are increased, but after that they are less severe.

Dr. Barker recognized the importance of having positive rules, but the difficulty of laying them down in the case of ergot. He would never use it in the first stage, never to induce contractions, never except in vertex presentations. In perhaps one case in one thousand, in a second stage with circumstances similar to those described by the previous speakers, there being only a lack of force to complete parturition, he employed it. These cases, of which he had had perhaps three or four, were those where labor was retarded by an emotional condition which caused oversensitiveness to pain, so that the patient could not make use of the accessory muscles to help herself. Hence the pains were fruitless and so ceased. Here he would give a few whiffs of chloroform to overcome the morbid sensibility, and follow with two or three doses of ergot. If the birth was delayed more than a half hour, would use forceps. Dr. Barker disagreed with the reader as to the effect on after-pains, believing that ergot diminished them. In part it was for that object that he used ergot after the birth of the child, and *not* to prevent hæmorrhage or to expel the placenta. After pains are simply labor pains, and there will be none if there is nothing to expel, that is, if fixed contraction of the uterus is secured. The most important use of ergot is to promote involution, when, for any reason, this is retarded. It is valuable, conjoined with tonics and stimulants, in a "slow getting up."

The President asked the question whether it was the experience of any that an anæsthetic increased the action of ergot, as it did sometimes of opium, so that from having had no effect it suddenly manifested itself by precipitate activity.

This question was not answered. The discussion here for a time went outside the subject strictly before the Society.

DR. BARKER denied the assertion of a previous speaker that anæsthetics increased the liability to post-partum hæmorrhage. He used them constantly whenever the pains were at all severe, and had employed them thus in several thousand instances without having had a single case of post-partum hæmorrhage. On the contrary, they prevent that accident, which is usually due to exhaustion of nerve power. Some women who had suffered from severe flooding as a regular thing after previous labors, when treated in this way had no hæmorrhage, and were saved by chloroform the great exhaustion which they had heretofore experienced.

DR. HOWARD, of Baltimore, said he never used ergot to increase the expulsive powers under any circumstances. He thought that forceps were then to be resorted to. In the course of his remarks he expressed strong dissent from what Dr. Barker had said about the effect of chloroform on hæmorrhage. He never would use an anæsthetic without following it by ergot. He depended greatly upon ergot when he had reason to fear post-partum hæmorrhage. Squibb's extract, five grains to ten minims of water, injected deeply, had never in his experience caused an abscess, and produced its effect in one quarter the time that it would if taken by the stomach. When the uterus is more "frangible than dilatable," he found the best effects from chloral. One advantage not alluded to of ergot was the lessening of the tendency to puerperal fever by driving all the blood out of the uterus and preventing any stagnating discharges.

DR. TRASK, of Astoria, said he now used forceps in many cases where years ago he employed ergot. The latter is uncertain in its action. He administers a *full dose* (one drachm) just as the head is expelled, not to remove the placenta, which he expects to get out of the way before the ergot acts. He used this routine treatment on account of two or three cases which had happened when in multiparæ relaxation had come on in from thirty to forty-five minutes after the birth, with abdominal distention and flooding.

As to the use of anæsthetics the speaker also differed from Dr. Barker. He so distrusted chloroform that he was resolved never to use it again. He had, last winter, a case where it caused uterine inertia, requiring the application of forceps, and followed by alarming hæmorrhage.

DR. ENGELMANN, of St. Louis, emphasized the evils of ergot in the hands of midwives and ignorant practitioners. He said that ergot was to the midwife what forceps were to the skilled obstetrician. Some more harmless weapon ought to be put into their hands, as quinia, ipecac, or even Dover's powder. For himself the speaker always carried ergot, rarely used it, and then only when the uterus was empty. When subinvolution was feared there were safer agencies, as external pressure and hot-water injections. The latter should be always made antiseptic.

DR. DRYSDALE asked leave to defer his paper until some members in reply to whom it was written should be present.

TREATMENT OF THE PEDICLE IN OVARIOTOMY.

DR. SUTTON'S paper on the treatment of the pedicle in ovariotomy was then read, in the absence of the writer, by the secretary. The paper discussed the various methods in use among the leading ovariotomists of Europe, among whom the writer had been studying. In Houston's operation of 1701 there is no record of the disposition of the pedicle, and it is probable that the operator unconsciously performed enucleation of the lining membrane of the cyst. McDowell, in 1819, did the first systematic operation, and tied the pedicle, carrying the ligature through the opening. The extra peritoneal method was first employed in 1848. The écraseur was first used in 1850. The methods of various operators during the last thirty years were briefly reviewed, most of the Germans, with variations as to the material of the ligature and the method of securing it, following in the main McDowell's original operation except that the free ends are cut off, and the pedicle thrown wholly back. Billroth, however, uses Paquelin's cautery after ligaturing; he does not use the clamp cautery. At present Sir Spencer Wells, following Stilling, uses the clamp, of which he is the only remaining advocate. It is worthy of notice that Keith also, in his use of the cautery, follows the same master, Stilling. The cautery is that of Baker Brown, and his method of employing it was learned from Koeberlé. The cyst is cut off one half inch above the clamp and the cautery at a dull red heat burns off the intervening tissue down to the clamp. The latter gradually becomes heated, and by the time the cauterization has reached it, is itself in a condition to char the tissues that are held in its bite. They are thus converted into a substance like cold glue. With this method Keith has made the best record hitherto attained, fifty operations with only one death. He has now practically discarded the spray, having used it only twice in the last three months. Both these patients died. This result is ascribed to the septic condition of the infirmary where the operations were performed. But cases have occurred of poisoning from a five per cent. carbolic spray. Lawson Tait, it was remarked, ridicules Listerism, and uses for his instruments and sponges only pure water. In general the Germans follow Lister, and use the spray, though Billroth, after filling the room with spray, turns it off before the operation. The writer enumerated, as among favorable conditions for the operation, the use of purgatives after the operation, judicious use of opium, cleanliness, climatic influences, careful etherizing, absence of unnecessary spectators, having one regular assistant, avoidance of public hospitals. And as conditions of failure, besides the opposite of those just mentioned, repeated tappings of the cyst and organic disease of other viscera.

MR. J. KNOWSLEY THORNTON, of London, being asked to open the discussion, said that waxing of ligatures, and steeping them in carbolic oil he had observed to cause pelvic abscess. He uses Chinese silk soaked in a five per cent. aqueous solution of carbolic acid. He corrected the essayist as to the position of Sir Spencer Wells with reference to the clamp, saying that that surgeon had for some years advocated the intra-peritoneal method, as almost all others have come to do. The speaker considered the spray an important element in the operation, and said that a perfect Listerism which could show a series of seventy-nine consecutive recoveries without a death was not to be lightly set aside. One advantage of the spray is that it enables the operator to dispense with drainage, which he found was apt to leave a weak spot in the cicatrix liable to permit ventral hernia. The speaker, referring to a list of statistics given in the paper, made a correction as to the recoveries attributed to himself, which were in reality ninety-three in a series of one hundred cases. Practically his only deaths now are the malignant cases, and it is a question whether operation is justifiable upon such patients even at the solicitation of their friends. Theoretically Mr. Thornton is in favor of the cautery, as not leaving any real foreign substance behind it, though this eschar might, he thinks, lead to putrefaction if Listerism were not observed. Practically he uses the ligature, the stump rapidly becoming vascularized if, as should be the case, the threads are not drawn absolutely tight. He had never seen a case of carbolic poisoning except once, in an infant, when nephrectomy was performed. He favored the free use of opium, giving a drachm of the tincture in the first twenty-four hours. In disagreement with the essayist, he avoids purgatives altogether. The matter of always having the same assistant was unimportant, no man being a competent operator unless able to work single handed. He concluded with a question about climatic influences, thinking they must be more unfavorable in America than in England. In answer to a question by Dr. Wilson, of Baltimore, Mr. Thornton said that laudanum at first diminishes the tendency to nausea, but after two or three days it was apt to cause sickness, which stopped with the cessation of the drug.

Dr. Lyman considered opium as among the most effective antiphlogistics, and believed in its free use after operation. In answer to a suggestion from the President regarding bad effects from diminished secretion, he thought that these were more than counterbalanced by its antiphlogistic advantages. Apropos of nausea, he suggested that in special cases the soft opium picked out from the middle of the lump and administered in pill form was least likely to cause sickness.

Dr. Kimball, of Lowell, spoke of his long experience in ovariotomy as being almost a chronicle of the history of the operation. In the last thirty years he has had an opportunity to test most of the proposed changes in method. At first he tied the pedicle and left the ligatures inside. Then he had used the clamp, following Wells. Later he passed the ligatures through the posterior cul-du-sac into the vagina, after a time carrying them through a canula which still better facilitated drainage and permitted irrigation. Now he drops back the pedicle, burning it off with the cautery at once, instead of, as formerly, first cutting it outside the clamp. He considers the spray of doubtful utility, and will not again use it. The speaker mentioned three cases, all within from twenty-four to forty-eight hours of the operation, of hæmaturia, suppression, and acute coma which he attributed to carbolism from the spray. He uses Lister dressings externally. Regarding the influence of climate, he believed it was not so favorable as in England; had noticed that it was difficult here to comply with Brown's test that the skin should be in good condition at the time of operation. In answer to Mr. Thornton, Dr. Kimball said he had never known of hæmaturia, etc., simulating carbolism, when the spray had not been used.

Adjourned.

During the intermission the Society and their guests were entertained by Dr. G. Kimball at the St. Botolph Club.

AFTERNOON SESSION.

The first paper was by Dr. T. Parvin of Indianapolis on

THE CARE OF THE PERINÆUM IN THE SECOND STAGE OF LABOR.

Statistics were given showing great divergence of observation regarding the frequency of ruptured perinæum. This structure may, by reason of long exposure to the propelling force, give way several days after labor. The causes, so far as the pelvis is concerned, are a too acute angle of the pubic arch, too straight a sacrum, rigidity, infiltration, etc., of the perinæum, and too great age of the primiparous patient. The causes referable to the fœtus are lack of complete flexion of the head, and increased size of that part. The conduct of the labor was the element of the ætiology most discussed by the essayist. The use of the forceps is sometimes assigned as a cause, but it should be remembered that often their employment is delayed until the tissues have become œdematous, and they are often used under circumstances of haste. Failure to support the perinæum and an attempt to do so have both been mentioned as causes of rupture. The reader believed that the true cause was precipitate delivery, that is, delivery when the force was too great and the time too short. Hence the secret of treatment is to hinder too abrupt expulsion. A position on the left side is most favorable as lessening downward pressure upon the fourchette and the too great separation of the knees, as well as from considerations of modesty and allowing the perinæum to be better watched. The patient should be enjoined to breathe frequently and not to bear down. The head should be held back, and forceps may be of use in its management. If possible the head should be delivered in the interval between pains, and the fingers should press on the forehead of the child, so as to bring the occiput close up to the pubic arch. Incision as a prophylactic was considered. This is generally made laterally, but according to Tarnier is not always successful. He recommends an incision of the median raphé, curving away from the anus so as to spare the sphincter. The frequency of this operation was said to vary from three cases in 3246 in Dublin to 56 in 212 in Philadelphia. The paper closed with a plea for prompt sewing up of rents, for which purpose horse-hair was preferred as unirritating. The binding of the knees together after this operation was characterized as a "cruel barbarism."

Dr. Albert H. Smith, of Philadelphia, opened the discussion, saying that to his mind it was more a question of managing the head than the perinæum. The pressure of the head should be directed from the middle line of the perinæum to the lateral portions where rupture rarely occurs. To do this, press on the part of the head which impinges against the mid-line of the perinæum. This relieves the strain upon the raphé and at the same time widens the head. The manœuvre is best executed with the thumb, but may be aided by the other palm lying on the perinæum, the middle portion pressing it lightly, and the thumb and finger relaxing it by pressure on the sides. If the perinæum is very rigid the finger may be advantageously used in the rectum, but it should be remembered that this may, if the pressure is considerable, cause paralysis of the sphincter. The speaker favors episotomy in selected cases. He finds that incisions made one third of the way from the raphé to the clitoris on either side had a marked effect in letting the fourchette backward during transit of the head. If there is a slight rupture, he applies strong carbolic acid, so as to produce an eschar and hinder septic absorption. If the rupture is deep, he sews it at once.

DR. MANN, of Buffalo, spoke of the treatment of rupture by serre-fines which he had formerly indorsed, but which he now no longer recommends. The accident of rupture is sometimes caused by a protrusion of the parietal bones catching in the upper part of the orifice and so increasing the tension. In such cases this part of the vulva should be slipped over the head first. His experience of episotomy, confined to hospital cases, had been that diphtheritic deposits were apt to gather on the cut surfaces.

DR. CHADWICK believed that "supporting the perinæum" was a misnomer, the proper manœuvre being really a prevention of too rapid transit of the head. Contrary to Dr. Smith he saw nothing to be gained in diverting the pressure from the raphé to the sides. At the time of the emergence of the head the vulva is merely a circle attached at the perinæum, and pressure is equal at all parts of that circle. No ordinary amount of abduction of the knees can stretch the perinæum, but flexion of them can. Hence the thighs should not be carried too high when the head is emerging.

DR. HOWARD, of Baltimore, had confirmed Schroeder's statement of the greater safety of the lateral position by inquiries of a large number of parous women. Those who had escaped laceration were generally delivered on the side, and those with bad tears had all been on the back. When there was rigid perinæum he found relaxation best promoted by anæsthesia. The speaker was surprised that no one had mentioned the influence of the shoulders in causing laceration. In his experience it was a common factor in producing rupture. To guard against it he was in the habit of introducing his finger and extracting the anterior shoulder.

With regard to the time of a primary operation the speaker preferred to do it at once, but he has had good results when obliged to defer it to the second day, therein differing from Hewitt, who says it is useless after one hour. The appearance of the freshly made tear may convey a fallacious idea of its extent and of the necessity for operation.

DR. P. F. MUNDÉ, of New York, spoke of the use of the forceps as a prophylactic. In one case where he had already done episiorraphy, and feared a second laceration, the head did not come squarely down upon the floor of the perinæum, owing to incomplete rotation; he put on forceps, and drawing the head well down onto the floor removed them, delaying the exit of the head as much as possible from that point. His treatment during the emergence of the head is with the patient on the side, the finger in the rectum, and the thumb on the head to push it back during the pains and extend it in the intervals, taking care not to produce a brow presentation. In this way he occupies fifteen to thirty minutes in getting it through the vulva.

DR. PARVIN, in closing the discussion, favored the old use of the forceps, when they were not removed but employed to keep the head well up to the pubic arch. He disapproved of the insertion of the finger in the rectum as exciting voluntary and reflex efforts, and taking up space. He considered the old term "supporting the perinæum" as a true one. It is a reinforcement of the vulvo-vaginal ring.

DR. FORDYCE BARKER read a paper on

LEUCORRHŒA; ITS CONSTITUTIONAL CAUSES AND THERAPEUTICS.

It is not a disease, but is a symptom of many opposite conditions, and may itself become the cause of local changes. A variety of local means have been tried for its cure, as incising the cervix, sewing it up, and curetting the cavity. Their effect is only temporary, and the patients become a burden to themselves and a dread to their physicians. Leucorrhœa is their most prominent symptom, and they consider it, and not altogether wrongly, the cause of the rest. Tyler Smith believed that long-continued leucorrhœa would cause erosion of the uterine canal, with the "cockscomb granulations," which are really the penniform rugæ, enlarged, denuded of epithelium, and flexed. They resemble the results of laceration, but are distinguishable from the latter. Two cases in which Emmet's operation had been successfully performed with perfect relief of the symptoms, afterwards broke down by anxiety and overwork in taking care of sick friends; first leucorrhœa appeared, then excessive menstruation, then backache. The cervix in each case showed no sign of laceration, and no reposition of the lips was possible; yet the cockscomb granulations were present. Both recovered under constitutional treatment and vaginal injections only. The reader agreed with Dr. Tyler Smith that leucorrhœa removes the epithelium and causes hypertrophy of the cervix. A case was then given in detail where a woman had been an invalid for eighteen months, unable to walk, the symptoms only mitigated by local treatment. There was excessive neuralgic pain, so that chloroform was necessary for the examination. The cervix was very low, sensitive, bleeding, os patulous, and everything bathed in a foul discharge. There was great gastric irritability and hæmorrhoids. She was ordered to Long Branch, put on tonic treatment, and had sponge baths and vaginal douches of sea-water. The result was speedy cure of all the bad symptoms, recovery of locomotion, and pregnancy, the last child having been born twelve years before.

The importance of hygienic treatment for these cases was emphasized. The condition, sometimes known as "irritable uterus," corresponds to the "chronic catarrh of the uterus" of Scanzoni. Its constitutional causes are too often overlooked; among these are atmospheric influences, damp residence, plethora or anæmia (disturbances of nutrition), prolonged lactation, a standing position too many hours daily, nerve disturbances, (strong mental emotion being well known to cause leucorrhœa). The anatomy and physiology of the parts were then considered especially with reference to the circulation. The veins are of more importance as the seat of impediment than the arteries; they debouch into the uterine and pampiniform plexuses, which are outside the peritonæum. Any cause obstructing them disturbs the equilibrium of the circulation, especially any narrowing of the portal vessels; manifestly local treatment in such cases is fruitless. The writer had noted the disease frequently in young unmarried girls, especially those who had come to the city to finish their education; here overcrowding, overstimulation of brain, etc., may be assigned as causes.

The **PRESIDENT** indorsed the paper, saying that leucorrhœa ought no longer to be considered a disease.

DR. WILSON said that leucorrhœa might be a symptom of an overtaxed brain or of indigestion. He criticised the tendency of gynæcologists to be too much absorbed in local treatment. Any local trouble causes a demoralized state of mind which persists after the malposition or other mechanical trouble is relieved. When a woman has reached that point, often adversity or some necessary change in the manner of living is beneficial.

Brief remarks in accord with the paper were made by **Dr. Lyman** and **Dr. Reeves Jackson** of Chicago.

Dr. Johnson, of Washington, in confirmation of the last statement of Dr. Wilson spoke of cases that had got well when from lack of funds or other reason they had given up treatment and gone to work.

Dr. Smith, while agreeing with the paper in its views as to the necessity for constitutional treatment, thought the local conditions demanded investigation. Why in a depraved state of the system does one patient suffer from chronic disease of the eye, another of the ear, and a third of the uterus? Because some local condition, inflammatory or otherwise, *elects* the particular organ as the seat of disease. What may seem constitutional treatment may in reality be a local treatment. Even "Long Branch" may have a topical effect, if it means absence of marital relations, avoidance of stair-climbing by use of an elevator, etc.

The **President** pointed out the reasonableness of perversions of nutrition being accompanied by sexual derangement, inasmuch as the functions of nutrition and generation are both presided over by the sympathetic system.

Dr. Barker closed the discussion by referring to the value of the constitutional treatment when local examination is impracticable or unnecessary as in young virgins. He concluded with a sharp censure of the practice of some, particularly uneducated female practitioners, in continually examining their patients, who were thus completely broken down in their morale.

Adjourned.

RECEPTION AT THE ST. BOTOLPH CLUB.

In the evening the Society and its guests were invited to a reception given in their honor at the St. Botolph Club by the Boston Obstetrical Society. Many of the leading members of the profession in Boston were also present by invitation, and a pleasant evening was enjoyed.

SECOND DAY. MORNING SESSION.

The first paper was on

THE RELATIVE VALUE OF HYSTERECTOMY AND OF THE COMPLETE REMOVAL OF THE UTERINE APPENDAGES FOR THE CURE OF UTERINE FIBROIDS.

By J. **Knowsley Thornton**, M. B., C. M., of London, England.

The writer at the outset waived consideration of all so-called medical cases of fibroids, also of the many cases which caused the patients little or no discomfort. Also of polypoid growths which were readily twisted off. He confined his attention to the cases which, by hæmorrhage more or less severe, pressure and displacement of neighboring viscera, cause pain or other grave symptoms, and whose removal necessitates abdominal section. These growths are chiefly fibrocysts, intramural, or subperitoneal fibro-myomata, or sessile tumors, and though commonly said not to be fatal, may cause a great amount of misery, and not infrequently, directly or indirectly, lead to death. Even when not necessarily fatal they may call for an "operation of expediency."

The statistics of hysterectomy in Europe are bad. In two hundred and twenty-one operations by ten surgeons there were only one hundred and thirty-one recoveries, the mortality being thus over forty per cent. The writer said, in passing, that he feared the real mortality of ovariotomy, if it could be known, was as high, but thought that with that high death-rate hysterectomy could not be looked upon favorably. In the operation for fibro-cysts only (which most nearly resembles ovariotomy and gives the most favorable results) the mortality in the practice of these surgeons, including the writer, was 22.72 per cent. Taking the mortality of all cases of abdominal section for partial or complete supra vaginal hysterectomy at thirty to forty per cent., even though improvement has already begun with the use of the extra-peritoneal method, it is a dangerous operation, and the object of the paper was to recommend the substitution of a milder but equally effective procedure, namely, the removal of the uterine appendages. The first figures of Battey's operation were fourteen deaths in forty-six cases. Out of sixty cases by Mr. Thornton and two other surgeons, only five died, and of the writer's eight cases all recovered. The removal of the appendages cures the disease. The fibroid atrophies, the uterus soon regains its normal size or less, and the catamenia do not return. In all eight cases, one or both the ovaries were enlarged. It is not enough to remove the ovaries in whole or in part; a ligature must be applied to all the lateral vessels in the broad ligament.

After the blood supply of the ovaries and tubes is wholly stopped they are cut off. The tissues must be deeply transfixed and tied tightly. It is the ovarian and tubal arteries which are enlarged, and fortunately these are much easier to get at than the uterine arteries would be. Turning out the tumors from their capsule adds to the shock and is unnecessary, for directly the ligatures are applied the tumors begin to shrivel. In all of the cases where a year or more have elapsed the tumors have practically wholly disappeared, and the later cases seem taking precisely the same course. The writer uses perfect Listerism. The ligatures, of No. 3 Chinese silk soaked in a five per cent. solution of phenol, are perfectly absorbed. The mortality of the operation should be *nil*. Supra-vaginal hysterectomy is indicated in case the simpler operation should ever fail of its purpose, which the writer does not believe it will, or if there should be an alarming hæmorrhage which makes the graver operation necessary.

Dr. Goodell opened the discussion. He spoke of seeing Mr. Thornton operate in one of his cases where there was cyst of the ovary, which was opened and emptied Hæmorrhage was checked by protochloride of iron. A similar procedure in an operation by the speaker himself was the cause, he believed, of death. He was not disposed to abandon enucleation, in which he had been very successful. It does not mutilate the patient, and leaves the possibility of pregnancy. The speaker had performed oöphorectomy four times for fibroids, with two recoveries. In commenting on these cases he mentioned incidentally that it was not uncommon to have a kind of false menstruation after the removal of both ovaries. Also that traction upon the ovary he had observed to cause a peculiar species of shock, with great fall of the pulse. If during an ovariotomy fibroids are observed, both ovaries should be removed. The speaker closed emphasizing the great fatality of hysterectomy in this country, and even of exploratory operations. He would always do enucleation when possible.

Dr. Thomas said he had performed thirteen hysterectomies, with seven recoveries, of which one died in two months of chronic diarrhœa. He questioned much the propriety of the operation unless life is actually in danger. Forty per cent. of all Anglo-Saxon women are found in the post-mortem room to have fibroids, yet most of them never show any symptoms. If possible always remove fibroids per vaginam. It can be done if the vulsellum can be once fixed in the growth. The fear of going through the uterine walls is not well grounded. The speaker had three times done this himself without any bad results. He had never seen the intestine protrude through such an opening but once. The best method of doing hysterectomy is, if possible, to make a flap in the stump by a V-shaped incision; if this cannot be done, and the stump is broad, use Koeberlé's serre-nœud with glass drainage tube. When possible apply four ligatures to the pedicle and return it. Hysterectomy should not be done merely for hæmorrhage. This can usually be checked by curetting the endometrium, and removing fungoid growths. Often in cases where there is a large intramural tumor the hæmorrhage is really due not to this fibroid but to a small pediculated or submucous growth which could be easily removed. Caution should be used in doing hysterectomy after a course of ergot when the centre of the tumors may contain sloughs, which would be a source for septicæmia. The speaker had done seven oöphorectomies (not for tumors), with five recoveries. Would certainly try that operation before hysterectomy for fibroid.

Dr. Kimball spoke of his early experience of this operation, especially of having had the first successful result in it when undertaken upon a clear and correct diagnosis of fibroid. He characterized the operation as a "terrible" one, and refused to perform it unless driven to do so.

Dr. Engelmann, referring to the symptoms of shock on stretching the ovary, cited the analogous effect in traction on the spermatic cord.

Mr. Thornton, in closing the discussion, said that though he had never noticed this phenomenon in direct traction on the ovary, he had long been familiar with it in rough sponging of the posterior cul-de-sac, of which the effect probably was to draw on the ovarian attachments. He prefers his new operation to enucleation unless the mucous covering of the tumor has ulcerated through, because the latter procedure requires to be repeated for subsequent similar growths. He would not return the pedicle in hysterectomy. The presence of the false menstruation after oöphorectomy is puzzling. The amount of the flow seems to be proportionate to the degree of hæmorrhage from the fibroids before the operation.

THE ANNUAL ADDRESS BY THE PRESIDENT

was next in order. Dr. Lyman in the chair.

Dr. Emmet spoke briefly of the work of the Society, and of the death of Dr. James P. White, of Buffalo, one of its founders. He then passed to the discussion of a professional subject, namely, A New Method of Exploration, with the Pathology and Treatment of Certain Lesions of the Female Urethra. The following is a synopsis: The general practitioner knows at present as little about the female urethra as he formerly knew about uterine disease before Sims invented the improved methods of exploration. Women have had their bladders heroically treated with nitrate of silver, when the disease was in the utero-sacral folds. The bladder has been opened, closed, and reopened without discovering that the real cause of the trouble was urethral polypus. Previous means of investigation have been inadequate for the diagnosis of urethral disease. Six years ago the author first practiced an operation which he has been since perfecting. The principle of it is a button-hole opening in the urethra whereby it may be inspected from the vagina This method is the only one which is safe, simple, and within the capacity of any man of ordinary skill. The patient should be etherized, placed on the left side, and the anterior vaginal wall exposed. At first the writer used an instrument on the principle of button-hole scissors. The urethral blade being cylindrical, and the cutting blade meeting it through the urethro-vaginal septum. This he now no longer uses, substituting a block-tin sound in the urethra, upon which he cuts with a knife, extending the incision with scissors if convenient. The opening must stop short of the urethral outlet and of the neck of the bladder, else we shall produce incontinence. It should be beveled at the expense of the vaginal side, where the cut should be one third longer than in the urethral mucous membrane. The end toward the bladder should be more beveled than that toward the meatus. Through this opening the whole course of the urethra may be examined, the finger passed into the bladder, if desirable, and then the fistula be sewed up if wished. Contrary to the rule in closing vesico-vaginal fistula, the sutures must be passed well into the urethral mucous membrane. The patient must then lie abed a week, and the catheter should not be used. Or the fistula may be kept open any desired time by sewing the mucous membrane of the urethra to that of the vagina on the corresponding side of the button-hole. Cleanliness and the application of cerate to protect the freshly united sides from the action of the urine are all the precautions necessary. After the cure of the urethra this fistula can at any time be closed by secondary operation.

The essayist then considered the different forms of urethral disease already enumerated in his work on gynæcology, with reference to diagnosis and treatment by this method. These are (1) inflammation; (2) pedunculated growths, which, if at the neck, are likely to be pushed before the endoscope and folded against the side of the bladder, being so lost to sight; (3) prolapse of the mucous membrane, which is often caused by the dragging action of the child's head; (4) fissure; (5) urethrocele, where there is a pouching of the membrane, often accompanied by a laceration between the long fibres. Here the excess of tissue may be removed through the opening; (6) laceration from forcible dilatation. This latter procedure Dr. Emmet emphatically condemned, saying that it often caused incontinence, which was very hard to cure.

Dr. Barker, in the absence of Dr. Lusk and in his behalf, spoke of the operation in high terms, the latter gentleman having used it with great success.

Dr. Skene, of Brooklyn, claimed that we have already an accurate means of diagnosis in the endoscope, which is adequate to the demonstration of all lesions except polypoid growths at the neck of the bladder. Minute fissures at that locality he claimed could thus be better seen than when everything was covered with blood and urine after an urethral opening.

Dr. Lee spoke of favorable experience of Dr. Emmet's operation.

Adjourned.

During the intermission the Society was entertained by Dr. George H. Bixby.

AFTERNOON SESSION.

Dr. T. G. Thomas, of New York, read a paper entitled

NOTES OF TWENTY-ONE CASES OF EXTRA-UTERINE PREGNANCY.

After referring to the advance in our knowledge of the subject gained in the past ten years, and declaring his belief that ten years later the diagnosis and treatment of this class of cases would have become as certain as are those of female abdominal tumors now, he briefly reviewed each of the twenty-one cases which had come under his personal observation. In five cases there was rupture of the sac, of whom four died. In seven he interfered surgically, and three died. Two were tapped by the vagina, and both died. There was spontaneous discharge of the contents of the fœtal tumor in three cases, of whom one died. Electricity was used in six cases, nearly all recovered. He had generally used an interrupted galvanic current, with seventeen cells, one pole in the rectum, and the other over the tumor, a few minutes at a time, for several sittings.

The symptoms in most of his cases which had led him to make the diagnosis were those of normal pregnancy accompanied by (1) irregular gushes of blood, ceasing and suddenly recurring, without assignable cause; (2) fixed grinding pain in one iliac fossa, and perhaps also down the corresponding thigh; (3) severe paroxysmal pain, with constitutional symptoms, soon passing off to return in a few days with increased violence; (4) symptoms of abortion without the appearance of the fœtus; (5) the expulsion of membranes without an accompanying fœtus. The physical signs which sustained the validity of the diagnosis were: (1) Increased size of the uterus, with displacement upwards, forwards, or laterally; (2) symptoms of vacuity in the uterus yielded by the passage of the sound or use of tents; (3) the presence to one side of or behind the uterus of a cystic tumor, somewhat painful, rather immovable, yielding to palpation a sense of obscure fluctuation and sometimes (though not of necessity) *ballottement*. In advanced cases the placental souffle, fœtal heart, and fœtal movements will be present, but in the tubal variety (which is most common) death occurs too soon to allow these means of diagnosis. To distinguish between a normal and an extra-uterine pregnancy he would dilate the cervix with a tent and explore the uterine cavity with his finger, though the presence of a fœtus in the uterus would not disprove extra-uterine fœtation, as both might co-exist.

He would draw the following conclusions: If the diagnosis be established with reasonable certainty before the end of the fourth month, he would advise electricity before all other measures, as it would be harmless if the diagnosis were wrong, it avoids the nervous disturbances caused by a cutting operation, and it requires no surgical skill. After the fourth month he would advise laparotomy (or electrotomy if the tumor be low down in the pelvis) since electricity would leave a large fœtal body for absorption. If the pregnancy were abdominal he would wait for full term, and then do laparotomy or elytrotomy. If full term be passed, and the fœtus dead, he would wait the natural discharge of the fœtal remains, and aid nature if necessary, but if there were bad symptoms he would do laparotomy with antiseptic precautions. If rupture of the fœtal cyst occurred before the diagnosis had been made he would wait to see if the patient could endure it, but if the effects of hæmorrhage, peritonitis, or septicæmia presented themselves, he would do laparotomy antiseptically.

Dr. H. J. Garrigues of New York then read a paper upon

THE USE OF ELECTRICITY IN EXTRA-UTERINE PREGNANCY.

After giving the details of a single case the reader passed to general considerations. He held that the diagnosis of extra uterine pregnancy in the earlier period was less difficult than that of normal pregnancy of the same date, and no more so than that of pneumonia or a fractured humerus. He relied upon the cessation of menstruation, nausea, the appearance of the breasts, colicky pain in the hypogastrium, frequent micturition, an extra-uterine tumor, over which there is felt pulsation in the vagina, the displacement of the uterus, the passage of blood and shreds by the vagina. Only parametritis, ovarian cyst, cyst of the broad ligament, and hydrosalpinx needed to be differentiated. There are five methods of destroying the fœtus: (1.) Puncture of the sac, which is uncertain, and in which there is risk of hæmorrhage and septicæmia. (2.) Injection, which is tedious. (3.) Electrotomy, with risk of septicæmia. (4.) Laparotomy, which is out of date. (5.) Dilatation of cervix, which might do toward the end of term. (6.) Electricity, which is sure and without danger, and which he advocated without reference to the age of the fœtus.

Dr. Campbell, of Georgia, detailed a case of tubo-ovarian pregnancy which went to full term without symptoms of rupture. He drew attention to the fact that alterations in the mammary glands, etc., might proceed from mere ovarian irritation.

Dr. Wilson narrated a case of twin pregnancy, in which the uterine fœtus was delivered at eight months, and the extra-uterine one at full term by abdominal section, living two years to die of some infantile disease.

Dr. William Goodell differed from Dr. Garrigues as to the case of diagnosis in extra-uterine pregnancy, and gave notes of thirteen of his own cases, among which was one of a woman who, near full term, fell upon the upright of a chair and ruptured the wall of the uterus so that the fœtus became sub-peritoneal, but recovered, and came to him many years later on account of an offensive vaginal discharge. The passage of the sound discovered a foreign body in the uterus, and, after incising the cervix, he removed fœtal bones, intestines, and scalp.[1]

---

[1] Vide Journal, September 14.

DR. SMITH suggested the thermometric test to determine the death of the fœtus.

DR. LYMAN thought that in the stage when electricity was of most value the diagnosis was most difficult.

DR. HOWARD, of Baltimore, mentioned several cases, and called attention to the hearing of the fœtal heart without the placental souffle as an important point in diagnosis.

MR. THORNTON, spoke of two cases of his own, and asserted his conversion from the knife to electricity since hearing Dr. Thomas's paper.

DR. GOODELL agreed with Dr. Howard as to the value of the absence of the placental souffle, which, being really a uterine souffle, could not be present in extra-uterine pregnancy, since there was no uterine tissue, and, even were it placental, the placenta would be too far removed from the ear.

ANNUAL BUSINESS MEETING.

Thursday evening the Society held its annual business meeting at which the following officers were elected: President, Dr. Gilman Kimball, of Lowell; Vice-Presidents, Dr. A. H. Smith, of Philadelphia, and Dr. Theophilus Parsons, of Indianapolis; Secretary, Dr. Frank P. Foster, of New York; Treasurer, Dr. Paul F. Mundé, of New York; Council, Drs. John Byrne, of Brooklyn, W. T. Howard, of Baltimore, A. R. Jackson, of Chicago, and H. F. Campbell, of Augusta, Ga. Drs. M. D. Mann, of Buffalo, and W. H. Baker, of this city, were elected to fellowships, and Dr. Lawson Tait, of Birmingham, Eng., and Mr. J. Knowsley Thornton, of London, to honorary fellowships. It was voted that the next session of the Society be held in Philadelphia on the third Tuesday in September, 1883.

(*To be concluded.*)

Recent Literature.

Mental Pathology and Therapeutics. By W. GRIESINGER, M. D., Professor of Clinical Medicine and of Mental Science in the University of Berlin; Honorary Member of the Medico-Psychological Association; Membre Associé Étranger de la Société Médico-Psychologique de Paris, etc., etc. Translated from the German (second edition) by G. LOCKHART ROBERTSON, M. D., Cantab., Medical Superintendent of the Sussex Lunatic Asylum, Hayward's Heath, and JAMES RUTHERFORD, M. D., Edin. New York: William Wood & Co. 1882.

Griesinger's Pathologie und Therapie der psychischen Krankheiten, published in 1845, while the author was not quite thirty years old, and an assistant physician in an insane asylum, soon became the first authority in mental disease. The second edition, very much enlarged, appeared in 1861; the third, unchanged, in 1867, the year of the publication of a translation by the New Sydenham Society, and the fourth in 1876, after the author's death. Too much praise cannot be given to a book which marked an epoch in the progress of the study of mental disease, and which for nearly a third of a century maintained its position as the best treatise on insanity in any language. The views expressed therein are still in the main held by alienists in all parts of the world, although the book is naturally far from being abreast of the work of the leading German writers of the present time.

The reprint of the Sydenham Society translation, just issued by Messrs Wood & Co., is on very poor paper, with such type and so crowded as to be read only with difficulty. On 370 pages are contained the 538 of the German, and the 524 of the English edition. In spite of the fact that the translation has been poorly done, most of the errors are of a kind not to lead one very far from the original. It is obvious, for instance, what is meant by *strong* inflammation, and that *mind* is understood where *soul* is expressed. It might not be clear that a *delirious perception* is a translation of the German word for *delusion*, and certainly none but a German scholar would know what is meant by saying that "dry and moist constitutions" (!) are equally liable to insanity.

However much this book is to be condemned as destructive of eyesight and productive of brain weariness, it must be acknowledged that Griesinger is still, to those who read only the English language, the first authority in mental disease, as well as the most scientific writer upon insanity.

Annotazioni di Chirurgica Œtomorfica. Pei DOTTORI G. ALBERTINI e P. PANZERI. Milano: Pietro Agnelli. 1881.

Under this title is published an excellent monograph on osteotomy and osteoclasis based solely on clinical facts in the experience of the writers.

The work is well illustrated, and is a valuable addition to the literature of the subject. With the exception of MacEwen and Boeckel's books the monograph in question is the most useful contribution on these new procedures in surgery. The illustrations alone present convincing evidence that osteotomy and osteoclasis are not a passing craze among enterprising surgeons.

— Triplets occur in France but once in 8256 labors. The following case, reported by Hergott (*Ann. de Gynécol.*, June, 1882), is the only one that has occurred in the last ten years in the maternity at Nancy. S., aged twenty-four, nullipara, entered hospital in labor five hours. Membranes had ruptured, cervix was obliterated, os dilated one inch, auscultation reveals two fœtal hearts, one above umbilicus and to the right, the other below; on the left nothing is heard. Palpation is difficult, but one head is determined above on the right, a second is engaged. In two hours a female is born, followed shortly by a male. A third fœtus is then discovered, presenting by the breech. Is soon born, and is a male. One female and two males is usual, but, usually, the presentation for all is vertex. The placenta was double, united by a membranous band. Each fœtus had separate cords, but those of the males united, and were inserted into the same placenta. Each fœtus was inclosed in separate membranes. On the third day the last child born died; the following day the second male; fifteen days after the female. The mother recovered. — *Am. Jour. of Obstetrics*, August, 1882.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 28, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE NEW SCHOOL OF VETERINARY MEDICINE.

AT the last meeting of the Overseers of Harvard University the appointment was made of a Professor of Veterinary Medicine, and thus the first step taken toward the establishment of a course of veterinary instruction.

The need of such an opportunity for the study of comparative medicine has long been felt in this community by those capable of appreciating the deficiency, and it is cause for congratulation that the want is at last to be supplied. The appointment, made at the same time with the new Professor of Surgery, suggests not exactly a close relationship between the veterinary and human medical courses, but at least a coöperation between them. Such an association would, without doubt, be for the benefit of both courses. Comparative medicine is capable of being utilized for the benefit of students of disease as seen in the human race; we are not aware that it is systematically so used, as yet, anywhere in the United States, though one of the oldest universities of the country is now maintaining a gentleman abroad, we believe at Alfort, who is fitting himself to instruct in such branches. The abundant opportunity for post-mortem examinations offered by a veterinary infirmary gives it certain advantages, and we can imagine a time when comparative medicine will form part of an introductory course to a higher medical school, as comparative anatomy does already in some of the schools of the old world — or better, perhaps, when human and comparative pathology shall be studied together, each serving to illustrate the other. We feel sure our dumb fellow-sufferers would be none the worse for being intrusted to the medical care of those who know something of the relations their diseases bear to human ailments.

We have only begun to study the reciprocal pathological relations of men and animals. Hydrophobia and glanders suggest well known relationships; trichinosis is even more important and influences strongly an important branch of commerce; and the work of Toussaint and his confrères at Alfort, Lyons, and other French veterinary schools, in connection with the researches of Pasteur, opens a field the importance of which to the human race we hardly dare to contemplate.

The first duty, however, of the newly appointed professor is evidently the instruction of future practitioners of veterinary medicine, and it is to be hoped the efforts of the university will be encouraged by the attendance of a goodly number of appreciative students.

The new professor, Mr. Charles P. Lyman, is known as the author of the report of the Agricultural Bureau on Contagious Pleuro-Pneumonia, and there is every reason to expect that he will prove a popular and successful instructor.

◆

ANTHROPOMETRY.

THIS subject, the importance and value of which is evidently making itself more widely felt, has on several occasions recently been brought before the readers of the JOURNAL, and we are glad to welcome a new contribution to it which comes from Milwaukee under sanction of the Wisconsin Board of Health. To the last report of that Board, Dr. Geo. W. Peckham, teacher of biology in the Milwaukee High School, contributed a paper on the Growth of Children. We are pleased to have this evidence that the work of Dr. H. P. Bowditch, embodied in his paper on this subject in the eighth report of the Massachusetts Board of Health, is bearing fruit, and stimulating others to labor in the same field.

A good deal may be done even in so extensive a department of inquiry by a few judicious, earnest, and enthusiastic workers, and much must be done in gathering and comparing individual and class measurements before general laws can be reached. We have previously directed attention to Mr. Galton's suggestions in regard to anthropometrical laboratories, and Professor Pagliani's researches and conclusions in regard to growth in Turin were noticed in the columns of the JOURNAL by Dr. C. S. Minot not long since.

Dr. Peckham's paper presents the results of measurements taken among the public and private school-children of Milwaukee, a city of 125,000 inhabitants. The cards used in obtaining the data were those adopted by Dr. Bowditch in his measurements of the children in the public schools of Boston. Measuring rods built upon firm platforms were used in taking the heights, and Fairbanks' scales, the accuracy of which was frequently tested, in taking the weights. Due care seems to have been taken in obtaining these data as well as in arriving at the birthplace of parents and grandparents. Some private schools were, as has been said, included in these inquiries.

In making up his tables, Dr. Peckham has departed from the usual practice followed by Roberts, Gould, and the majority of previous compilers of anthropological statistics, and substitutes "averages" for "means." His inquiries have impressed him strongly with the belief that race, sex, and age being left out of view, the degree of density of population is the most important factor in determining the size of individuals.

His results are summarized as follows: —

I. The rate of growth in the two sexes is such that the boys are taller until the twelfth year, and heavier until the thirteenth; between thirteen and fifteen the girls are both taller and heavier; after the age of fifteen the boys excel the girls both in weight and in stature. Girls nearly cease to grow when about seventeen years of age.

II. Children of pure American[1] descent are taller than children of foreign-born parents; but when compared in weight with children of German parents are, on the whole, lighter. The greater height is largely due to difference in stock or race.

III. For the same reason children of American[2] parentage are taller than those of either German or Irish; and the Irish are taller than the Germans.

IV. School children in Milwaukee are taller than school children in Boston. The weight of boys in Milwaukee is greater than that of boys in Boston. Girls in Boston are very slightly heavier than girls here. The superiority in height is probably due to the less degree of density of population in Milwaukee as compared with Boston, the struggle for existence is not so severe, and the life here has fewer urban disadvantages than in that city.

V. The height of American-born men, as is shown by my tables, is apparently more modified by the conditions accompanying density than by all other influences, race excepted; urban life as compared with rural life tending toward a decrease of stature. The forces here referred to act at all ages from five years upward.

VI. The rate of growth of Germans is markedly modified by residence in this country through one generation. In inter-marriage between Americans and Germans the offspring seem to take the height of the taller parent.

VII. The growth of the body and of the lower extremities takes place in such a way that the length of the body of the girl is less than that of the body of the boy until the tenth year, and thereafter greater until the sixteenth. From fifteen to eighteen the bodies of girls grow only two inches, and the bodies of boys over four. For the lower extremities, at nine years those of the girl are longer, at eleven shorter, and from twelve to fourteen again longer. At fourteen the lower extremities of the girls almost cease growing, while those of the boys increase by four inches between the ages of fourteen and nineteen.

◆

MEDICAL NOTES.

— Prof. E. S. Wood, M. D., of Harvard College, and Prof. B. F. Davenport, M. D., of the Massachusetts College of Pharmacy, have been appointed by the Board of Health, Lunacy, and Charity the analysts under the act relating to the adulteration of food and drugs in Massachusetts.

— The *Berliner klinische Wochenschrift* makes the following observations upon the difficulties which lately arose in supplying a successor to Professor Langenbeck: "Our readers are aware that not only Billroth, of Vienna, but also Volkmann, of Halle, declined complying with the call to Berlin. We cannot but, in the interest of our University and city (a large circle in which has manifested great interest in this nomination), express the liveliest regret at the refusal of two such men, whose names, especially that of the former, must necessarily present themselves when the first German surgeon is sought to be obtained for the chief city of the German Empire. It would, however, be entirely untrue to assign these refusals to any other cause than the personal relations which both clinical professors have established with their respective universities. And Volkmann's refusal is a strong proof how little reality there is in the fear-created phantom that a powerful centralization is to be dreaded. If a town and University like Halle can maintain a rivalry with Berlin, and fetter the wishes of a power of the first rank, this shows how far we, to our great joy, are removed from the condition of things which prevails, for example, in France, where such an occurrence would be an impossibility."

— The New York Post-Graduate Medical School has issued its prospectus for the coming year. The faculty is as follows: James L. Little, M. D., Professor of Clinical and Operative Surgery. William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System and of Medical Electricity. D. B. St. John Roosa, M. D., Professor of Diseases of the Eye and Ear. Clinton Wagner, M. D., Professor of Diseases of the Throat. Henry G. Piffard, M. D., Professor of Diseases of the Skin. Frederic R. Sturgis, M. D., Professor of Diseases of the Genito-Urinary Organs and of Venereal Diseases. Montrose A. Pallen, M. D., Professor of Diseases of Women and of Operative Midwifery. Thomas E. Satterthwaite, M. D., Professor of Histological and Pathological Anatomy. Mary Putnam Jacobi, M. D., Professor of Diseases of Children. Edward C. Spitzka, M. D., Professor of Medical Jurisprudence and State Medicine. William G. Morton, M. D., Associate Professor of Diseases of the Mind and Nervous System and of Medical Electricity. Herbert G. Lyttle, M. D., Associate Professor of Genito-Urinary Diseases and of Venereal Diseases. Edward T. Ely, M. D., Associate Professor of Diseases of the Eye and Ear. William H. Porter, M. D., Associate Professor of Histological and Pathological Anatomy. Whitfield Ward, M. D., Associate Professor of Diseases of the Throat. S. M. Roberts, M. D., Associate Professor of Diseases of Children. W. T. Alexander, M. D., Associate Professor of Diseases of the Skin. Henry Hughes, M. D., Associate Professor of Diseases of Women and of Operative Midwifery. M. Josiah Roberts, M. D., Instructor in Orthopædic Surgery and Mechanical Therapeutics. Seneca D. Powell, M. D., Instructor in Clinical Surgery. Graeme M. Hammond M. D., Instructor of Diseases of the Mind and Nervous System and of Medical Electricity. John H. Nesbitt, M. D., Instructor in Clinical Surgery. C. A. Van Ramdohr, M. D., Instructor in Gynæcology and Operative Midwifery. G. Fairfax Whiting, M. D., Instructor in Diseases of the Throat. S. S. Burt, M. D., Instructor in Diseases of the Eye and Ear. J. Hilgard Tyndale, M. D., Instructor in Physical Diagnosis and Diseases of the Chest. N. E. Brill, M. D., Instructor in Medical Jurisprudence and State Medicine. There will be three lecture terms of seven weeks each, beginning respectively on the 6th of November, 1882 the 8th of January, 1883, the 12th of March, 1883.

---

[1] Pure American; both *parents* and *grandparents* born in the United States.

[2] American; *parents* born in the United States.

— The *Glasgow Medical Journal* in a very trenchant book review takes occasion to criticise severely the use of medical, and particularly *quasi* popular, literature as a means for an author of "puffing" himself. The book in question, on Diet and Regimen, is commended to practitioners who are advised in the preface that they may also "safely put it into the hands of their patients," the author carefully appending both his town and sea-shore address. The authorities cited seem to consist chiefly of other works by the same author, and the book ends with a descriptive catalogue of works by ——— ———, M. D., occupying, with their contents, press opinions, etc., twenty-three pages. The naturalness of human nature is evidenced by the fact that a slight tendency to this same sort of thing is occasionally witnessed even in modest America.

— The same reviewer makes a criticism as pointed as it is brief on another book, namely: —

Abridged Therapeutics. By W. N. SCHUSSLER. London: Elliot Stock. 1880.

A concise manual of homœopathic therapeutics, of no value whatever.

Miscellany.

"THREATENED WITH TYPHOID."

MR. EDITOR, — No journal coincides so nearly and so generally with my own ideas as the Boston Medical and Surgical, and for that very reason it is a pleasure to write you an occasional remonstrance when you give utterance to sentiments with which I cannot agree.

You object, in your last issue, to the phrase "Threatened with Typhoid," apparently because you think it is used by men who claim the power of aborting the disease after it is once fully established. For such use of the phrase I have no word of excuse; but still there is a threatening which may be properly spoken of as such. Let me give you a little item of personal history.

Several years ago I was an inmate of an institution in which typhoid fever showed itself. Two young gentlemen, with whom I was intimately connected, were successively stricken down with it. (The conductor ventilated the sewers of the neighborhood directly under their windows.) One of these cases remained in the house, and was in part under my care. The diagnosis in each case was confirmed by gentlemen whose official position guaranteed their ability. After the disease was fully established in the second case, I found myself afflicted with a slight headache, marked dullness, quickened pulse, and, if I remember, a raised temperature. Fearing that my condition was the result of imagination (I had naturally dwelt much upon the sickness of my friends and my similar exposure), I applied for advice to two physicians outside of the institution. They both told me I was threatened with typhoid, and advised me to clear out, which I did. In the country I very soon returned to my normal state, and after perhaps a week or ten days returned to my duty; long before either of the cases mentioned above had even begun to convalesce. There can be no doubt, at least there was none in the minds of my advisers, that if I stayed I should have been the victim of typhoid: I was threatened with it, and the catastrophe was averted. Such cases are not rare. This one merely serves as an example.

Even with this incomplete note lying on my desk, a woman who has for two weeks nursed her brother with typhoid in a house where there have been two other cases, both fatal, comes to me to tell me that she feels decidedly stupid, and has a slight diarrhœa. Shall I quote your words, and tell her that she "has or has not the disease," and advise her to say *kismet*, with the Turkish soldier, and accept what the Lord sends her? Or shall I, on the other hand, incur your displeasure, tell her she is threatened with typhoid, and thereby induce her to absent herself from the scene of danger, and possibly escape? In following the latter course I do not deceive myself; I do not think that I deceive her; certainly I use language which the patient understands and may profit by.

I fear, Mr. Editor, I have simply failed to understand you. Y.

LETTER FROM PHILADELPHIA.

MR. EDITOR, — Evident signs of renewed activity are already exhibited in our several Societies. The College of Physicians, at its meeting September 6th, examined a case of immense, multiple, lymph adenoma encircling the neck, in a man about fifty years of age, in which the size of the swelling threatened suffocation. Dr. Addinell Hewson, who exhibited the case, treated it with applications of moist clay spread upon strips of bandage, renewed daily; and within a month the swelling had greatly diminished, and when presented it had reduced to more than one half. There had been no suppuration. The case was exhibited during the course of the treatment, in order that he might again be shown at a stage when the tumors might be still more reduced or entirely removed.

Dr. Whitaker, of Cincinnati, who has been spending some time in Professor Koch's laboratory in Berlin, passed through this city on his return home, and the College of Physicians, at the instance of Dr. I. M. Hays and others, improved the opportunity by inviting him to deliver a lecture before the College, upon the Bacillus tuberculosis and the methods adopted for its detection. Dr. Whitaker consented to give an informal demonstration of the subject, and a special meeting of the College was called for the purpose of receiving it on the 18th inst., which was largely attended. The remarks of the lecturer were received with close and appreciative attention and applause. He introduced his remarks with a short reference to the history of the doctrine of the contagiousness of consumption, giving a *resumé* of the experiments of Villemin, Klein, Cohnheim, Klebs, Toussaint, and others with regard to determining the question of the communicability of tuberculosis; and finally described the discovery of Koch of the tubercle bacillus, and the means taken to verify the supposed fact of its being the primary cause of pulmonary consumption. The means by which this organism can be detected were given in detail. Having a solution of aniline oil, in excess, in water (previously agitated for five hours) add to it methyl violet in alcohol (a concentrated solution) in the proportion of one hundred parts of the first to eleven of the second;

then with a platinum probe (rendered aseptic by heat) a small portion of the sputum or tissue is taken up and laid upon a glass slide, which is then passed two or three times through the flame in order to dry it, being careful not to burn it. Some of the coloring solution is now placed in a watch-glass, and the glass slide placed on top of it, face downwards, so as to expose the specimen to the solution, where it is allowed to rest for half an hour. The next operation is to decolorize it to a certain extent by exposing it to an acid bath (nitric acid, one part, distilled water, two parts), in which it is immersed and allowed to remain until it is almost entirely decolorized. It is then removed, and washed; a few drops of vesuvin are then allowed to flow over the surface, which gives everything a brown color *except the tubercle bacillus*, which keeps the violet color. The excess of coloring matter is next removed, and the specimen is ready for mounting and examination under a power of from four hundred and fifty to five hundred diameters. A number of beautiful preparations were exhibited under the several microscopes upon the table. It was declared that the bacillus of tubercle might be identified not only by its chemical and physical characters, which were described, but also by physiological experiment. The method of culture followed by Koch and the results of his experiments upon rabbits are already known. It was found in the course of the experiments that the tubercle bacillus only thrived in a temperature of from 30° C. to 41° C., and therefore its natural habitat must be inside the human body, especially in the lungs. The pathology of consumption, therefore, may be regarded as definitely settled, its place being among the acute infectious diseases. Tuberculosis means infection by the tubercle bacillus, and the giant cells found in the alveoli, about which there had been much discussion, are now regarded simply as large capsules for bacilli. With regard to the question of protective inoculation, it was pointed out that phthisis is not a self-protective disease, and therefore inoculation would not be likely to grant immunity. Safety, on the contrary, is only obtained by keeping free from the parasite. In concluding his remarks, Dr. Whitaker said that it had always been regarded as a breach of politeness to spit in public, but now it must be looked upon as more than a disgrace, as constituting a real danger of spreading the disease by the infected material drying into dust to be breathed into the air passages of others. Remarks were made by several Fellows of the College, and some questions were asked, which the lecturer answered courteously. On motion of Prof. S. D. Gross a vote of thanks was unanimously tendered Dr. Whitaker for his kindness in presenting this subject to the College.

A very interesting case was reported at the last meeting of the Philadelphia County Medical Society by Dr. J. I. Eskridge, which was remarkable not only for the recovery of the patient, but also for the effects of the remedy employed and its extraordinary amount. A middle-aged man was overcome by mephitic gases in cleaning out a deep cess-pool, and two other men who went down to rescue him were affected similarly, though to a less degree. There was no accumulation of carbon-dioxide, as a lamp had been let down, and burned without being extinguished. When Dr. Eskridge was called to the patient, he was comatose, cyanosed, and the feeble pulse was beating at the rate of two hundred per minute. It was decided to give ammonia by intra-venous injection, and accordingly the median basilic vein was cut down upon, and a temporary ligature placed around it. By mistake the aqua ammoniæ fortior was obtained from the druggist, whereas the doctor administered it as if it were the dilute solution. Twelve syringefuls (each containing about thirty minims) were given in pretty rapid succession, with most marked effect; the heart regained its power, the pulse became full and strong, and fell to eighty in the minute; the man quickly revived, and entirely recovered. The accident happened three months before being reported, and the patient was presented in good state of health to the Society. A small abscess had occurred at the point of incision, but it was superficial, and had rapidly healed. In this case it was stated, therefore, that nearly six drachms of strong water of ammonia were given by intra-venous injection, not merely without injury, but with absolute benefit to the patient. No heart trouble of any kind was caused, nor in fact any other unpleasant result except the small abscess, which was probably due to the original incision.

Professor Goodell had a case of nephrectomy last week, in a private patient, sent from Salt Lake City. She was about fifty years of age, menstruation regular, supposed to have ovarian tumor of recent growth. Upon performing laparotomy (under the carbolic spray and other precautions) Professor Goodell found that the tumor was in reality renal, the kidney had been converted into an immense cyst, which was turned out, and the pedicle, including the largely hypertrophied though patulous ureter, was ligatured. A small calculus (resembling uric acid) was found lying in the cyst after removal. The patient, during the few days that have now elapsed since the operation, has done remarkably well, and gives promise of speedy recovery. The case will be reported to one of the societies, probably the obstetrical, some time during the winter.

While discussing interesting cases, it is worth while to mention one at the German Hospital, now under the care of Dr. Ferd. H. Gross. The patient, a robust man, over fifty years of age, and weighing nearly two hundred pounds, has suffered for years with trigeminal neuralgia of the right side of his face, for which he had all his teeth on this side extracted, but without relief. As his sufferings were becoming constant and intolerable, he applied to Dr. F. H. Gross, who advised ligature of the right common carotid, which was performed at the hospital. This relieved the pain entirely for a time, but it again appeared in the lower jaw, and this surgeon accordingly trephined the jaw and removed a considerable part of the trunk of the inferior maxillary nerve. After this the patient was entirely free from pain for two years. He then applied for relief from pains in the upper jaw, and Dr. Gross resolved to excise the second branch of the nerve by a modification of Wagner's method, which he performed as follows: A curved linear incision was made along the lower border of the orbicularis palpebrarum muscle, and the tissues dissected off so as to expose the origin of the levator labii superioris muscle, which was pushed to one side, so that a hook might be introduced under the nerve as it emerges from the infra-orbital foramen by means of which a silk ligature was next placed around the external branches and tightly drawn. Next, the periosteum was elevated from the floor of the orbit by proper dissection, and an elevator (made for the purpose out of a silver tea-spoon) was placed under the periosteum, and the structures of the orbit were lifted up out of the way. The track of the nerve trunk could then be seen in the bone, and the canal was laid open, and the nerve was separated by a hook running all the way back to the spheno-maxillary fissure. A slender knife, bearing a very short and pointed blade at right angles to the shaft, was then introduced as far back as the foramen rotundum, and the trunk of the nerve cut, the peripheral end being next drawn out through the infra-orbital foramen, and the radiating branches were cut last; the wound was then closed by three or four ligatures. There was anæsthesia of the side of the nose after the operation, but no disturbance of vision. It is now more than a week, and everything is progressing toward recovery. There has been no pain whatever since the operation.

Having devoted so much space to the narration of cases, I am warned to be brief. Among the more important items of news is the presence in Philadelphia of Dr. Morell Mackenzie, of London, in whose honor an informal reception will be given by the Pathological Society on the 28th inst., on which occasion Dr. J. Solis Cohen will read a paper on Tuberculosis of the Larynx. As the profession generally is invited, it is hoped that some visitors may be present from Boston and other cities.

Among the minor items of interest occurring in this city, is that of a case of a healthy infant, three months old, one morning left by its mother in bed, who returning after a "few moments'" absence, found a large black cat sitting on the baby, with its head close to the child's mouth. The cat was at once driven away, but the child was dead. The query is, Did the child die of suffocation from having a heavy cat on its breast, or because the cat's breath was inhaled and was fatally deficient in oxygen; or was there a combination of both? The fact that the child's breath smelt of sweet milk might prove sufficient explanation of the position of the cat.

An instance of cream-puff poisoning occurred in this city recently, which resulted in a boarding-house keeper suing the confectioner for damages, because all his boarders were made sick. Another unusual suit for damages is down for trial next month. A lady sent a prescription to a druggist which required rhubarb pills; the intelligent assistant, not being able to find any of rhubarb, substituted compound cathartic pills, without notifying the patient, who took them according to the directions, was salivated and made very sick, and now seeks redress in the court for personal injury and loss of time.

I had also intended to devote some attention to what are claimed to be the oldest twins in the United States, living in Bucks County, Pennsylvania They are both male, over ninety years of age, have always lived in the same house, and were never married. They always vote the Democratic ticket, and probably, like all the others, attribute their longevity to the free use of tobacco and alcohol, and no doubt rise each morning early and cut a cord of wood before breakfast, but for this your correspondent is unable to vouch from personal observation, and would not believe it if he saw it.

Professor Gross has been working hard over the new edition of his great work, the System of Surgery, which is now all completed, and the author is giving himself a season of rest at the sea-shore. He is looking quite well, however, and his manner is as cordial and courtly as ever. Although relieved of the labor of didactic lecturing his interest in clinical surgery brings him constantly to the clinics of his son at the College hospital. The preliminary lectures are now being delivered at the colleges, the regular session of each beginning Oct. 2d.

◆

WOMEN AT THE UNIVERSITY OF LONDON.

THE following concerning the female candidates who have obtained honors at the recent examinations of the London University is taken from the *London Queen*: —

In intermediate examinations in medicine no woman's name appears in either sections of anatomy, materia medica, chemistry, or physiology, but in the examinations in arts and sciences, more particularly in the sections of modern languages, women are far more successful. The critical study of their mother tongue, however, seems hardly to be so much affected by them as that of French and German, although Miss Annie Dawe, of Bedford College, and Miss Louisa Brown, of Cheltenham, are in the second and third classes of honors in English. In Latin, though no feminine name appears in the first class, Miss Louisa Macdonald, of University College, heads the second, and Miss Helen Pattison, of the same college, and Miss H. E. Macklin, of Bedford, are in the third.

In French and German, however, the ladies more than hold their own. Miss Marguerite D. M. Goldschild, of Bedford College, is first of the first division in French, carrying off also the extra prize; and in the third class are the names of Miss H. Pattison, Miss C. Rickett, of Bedford College, Miss Adelaide Klein and Miss E. Macklin, both of Queen's College, and Miss Edith M. Pope. In German, again, the list is headed by a lady, Miss E. A. S. Dawes, and Miss Macklin, of Bedford College, is in the third class.

In the science subjects that are not strictly medical the name of one lady, Miss Elizabeth F. Toone, appears in the third class of honors in inorganic chemistry; while in experimental physics Miss Edith Aitkin, of Girton, is in the second class, and Miss Toone and Miss C. M. Pole, of Bedford College, in the third. Honors in botany fall but to the share of two ladies, Miss Aitken, who is in the first class, and Miss Isabel Clare Evans, of Mason College, Birmingham, in the second, while the zoölogical honors are all taken by men.

In the mathematical honor list the names of women do not appear, nor in that for zoölogy. In science generally the female students can hardly be said to be preëminently successful, while in modern languages other than English they have secured far more than the average proportion of the honors due to their numbers.

To the doctrinaires who maintain the absolute identity of the intellectual powers in the two sexes, the publication of these results must be the reverse of gratifying; while to those who recognize the rapid perception and great intellectual acuteness of well-trained girls, the list will not be surprising. That young women should prove better linguists than men of a similar age is what every experienced educator expected. That they should not be equal to them in abstract or practical science will disappoint no one except those crochety individuals whose conclusions can hardly be excused even on the ground of their want of experience.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 16, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	613	218	30.64	8.80	20.05	1.79	1.96
Philadelphia	846,984	316	128	14.22	2.43	—	3.48	8.22
Brooklyn	566,689	266	127	34.95	.56	20.67	2.26	4.12
Chicago	503,304	249	143	37.55	6.82	25.70	6.42	3.21
Boston	362,535	158	46	24.69	5.70	19.00	3.80	1.90
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	171	67	29.78	1.75	6.42	1.75	9.92
Cincinnati	255,708	99	45	23.23	7.07	8.08	1.01	4.04
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	70	33	32.84	4.28	15.71	8.57	9.26
Buffalo	155,137	86	57	51.08	3.48	29.03	—	8.12
Milwaukee	115,578	65	42	31.66	4.59	23.07	1.54	—
Providence	104,857	—	—	—	—	—	—	—
New Haven	62,882	24	11	36.42	—	24.95	—	—
Charleston	49,999	40	17	25.00	7.50	7.50	5.00	2.50
Nashville	43,461	20	8	28.66	—	19.04	4.76	—
Lowell	59,485	35	17	31.43	8.57	22.88	4.71	2.86
Worcester	58,295	17	5	11.76	—	5.88	5.88	—
Cambridge	52,740	15	7	30.00	—	30.00	—	—
Fall River	49,006	37	20	40.50	—	27.00	8.10	2.70
Lawrence	39,178	21	10	33.33	—	28.56	—	4.76
Lynn	38,284	16	5	31.25	—	18.75	6.25	—
Springfield	33,340	12	4	33.33	—	16.66	—	—
Salem	27,598	7	3	14.28	—	—	—	14.28
New Bedford	26,875	11	6	45.45	—	36.36	9.09	—
Somerville	24,985	8	4	37.50	—	25.00	12.50	—
Holyoke	21,851	16	10	62.50	—	50.00	6.25	—
Chelsea	21,785	9	4	22.22	—	11.11	—	—
Taunton	21,213	10	3	40.00	10.00	10.00	20.00	—
Gloucester	19,329	6	3	16.66	—	16.66	—	—
Haverhill	18,475	3	3	33.33	—	33.33	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	8	2	12.50	—	—	12.50	—
Newburyport	13,537	9	2	33.33	—	22.22	—	—
Fitchburg	12,405	8	4	12.50	—	—	—	—
Malden	12,017	1	0	—	—	—	—	—
Seventeen Massachusetts towns	122,878	49	25	53.12	2.04	44.90	2.04	—

Deaths reported 2476 (no reports from St. Louis, District of Columbia, and New Orleans): under five years of age 1142: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 732, consumption 323, lung diseases 130, diarrhœal diseases 410, diphtheria and croup 96, typhoid fever 78, malarial fever 45, scarlet fever 29, whooping-cough 29, small-pox 16, cerebro-spinal meningitis 16, puerperal fever six, measles five, erysipelas one, typhus fever one. From *malarial fevers*, New York 22, Brooklyn nine, Baltimore four, Chicago, New Haven, and Springfield two each, Buffalo, Charleston, Nashville, and Taunton one each. From *scarlet fever*, Cincinnati seven, New York six, Buffalo four, Philadelphia, Brooklyn, Baltimore, and Pittsburg two each, Milwaukee, New Haven, Chelsea, and Newburyport one each. From *whooping-cough*, Brooklyn 10, New York eight, Charleston three, Philadelphia and Milwaukee two each, Cincinnati, Buffalo, Holyoke, and Nantucket one each. From *small-pox*, Baltimore 14, Philadelphia and Nashville one each. From *cerebro-spinal meningitis*, Chicago four, Buffalo three, New York and Philadelphia two each, Pittsburg, Fall River, Fitchburg, Peabody, and Adams one each. From *puerperal fever*, Buffalo three, Cincinnati, Milwaukee, and Lynn one each. From *erysipelas*, Philadelphia one. From *typhus fever*, Chicago one.

Sixty-three cases of small-pox were reported in Baltimore, Cincinnati seven; typhoid fever 85, scarlet fever seven, diphtheria five, in Boston; scarlet fever 24, and diphtheria six, in Milwaukee.

In 36 cities and towns of Massachusetts, with a population of 1,037,014 (population of the State 1,783,086), the total death-rate for the week was 22.46, against 23.46 and 24.29 for the previous two weeks.

For the week ending August 26th, in 171 German cities and towns, with an estimated population of 8,445,698, the death-rate was 26.0. Deaths reported 4216: under five years of age 2474; consumption 481, diarrhœal diseases 376, lung diseases 268, scarlet fever 137, diphtheria and croup 123, whooping-cough 72, typhoid fever 67, measles and rötheln 23, puerperal fever 16, small-pox (Munich and Bonn each one) two. The death-rates ranged from 11.3 in Metz to 49.7 in Posen; Königsberg 41.1; Breslau 40.1; Munich 24.5; Dresden 20.6; Berlin 26.9; Leipzig 17.3; Hamburg 22.4; Cologne 29.4; Frankfort 18.6; Mainz 24.8..

In the 28 English towns, with an estimated population of 8,469,571, for the week ending September 2d, the death-rate was 22.7. Deaths reported 3688: acute diseases of the respiratory organs (London) 202, diarrhœal diseases 649, scarlet fever 89, whooping-cough 81, measles 47, fever 45, diphtheria 24, small-pox (London seven) 11. The death-rates ranged from 15.6 in Bristol to 34.8 in Hull; London 19.7; Nottingham 21.8; Newcastle-on-Tyne 23.7; Liverpool 25.4; Birmingham 28; Sunderland 30.7. In Edinburg 19.1; Glasgow 22.9; Dublin 27.3.

For the week ending September 2d, in the Swiss towns, population 494,390, there were 25 deaths from consumption, diarrhœal diseases 21, lung diseases 10, diphtheria and croup six, erysipelas three, typhoid fever three, whooping-cough two, scarlet fever one. The death-rates were, at Geneva 9.3; Zurich 10.1; Basle 17.9; Berne 18.4.

The meteorological record for the weeks ending September 9th and 16th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
September, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 3	30.128	70	83	60	93	52	74	73	S	S	SW	4	11	9	O	O	O	—	—
Mon., 4	30.044	72	78	67	82	76	92	83	SW	S	W	5	7	6	O	O	O	—	—
Tues., 5	30.111	67	81	66	75	79	73	76	NW	SE	W	8	6	3	C	F	C	—	—
Wed., 6	30.215	62	72	58	78	85	88	84	NE	E	E	12	12	2	C	C	O	—	—
Thurs., 7	30.027	63	75	57	87	66	90	87	E	E	S	3	9	8	O	C	C	—	—
Fri., 8	29.946	67	81	62	93	76	93	87	S	SW	NW	5	5	4	O	O	O	—	—
Sat., 9	30.028	61	65	59	93	89	96	93	NW	E	N	6	4	1	O	O	O	—	—
Means, the week.	30.071	66	83	58				82										8.36	.78

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
September, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 10	30.061	60	70	53	69	68	88	75	NW	E	SE	7	8	1	C	F	O	—	—
Mon., 11	29.849	60	65	56	90	100	93	94	NE	E	NE	9	18	17	O	R	R	—	—
Tues., 12	29.898	58	68	51	100	51	61	71	N	NW	NW	18	19	8	R	F	C	—	—
Wed., 13	30.198	50	68	46	72	55	74	67	W	E	SW	8	13	4	C	C	C	—	—
Thurs., 14	29.868	62	68	53	86	68	93	82	SE	S	SW	12	20	8	O	O	F	—	—
Fri., 15	29.706	63	70	59	75	48	71	65	W	NW	W	21	31	10	O	F	C	—	—
Sat., 16	29.834	64	75	52	64	28	42	45	W	W	NW	16	23	12	C	F	C	—	—
Means, the week.	29.345	60	75	46				71										27.5	2.91

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

HAMPDEN DISTRICT MEDICAL SOCIETY.

At a special meeting held at the Massasoit House, Springfield, on Tuesday, September 12th, a committee, consisting of Drs. W. G. Breck, P. LeB. Stickney, and S. D. Brooks, was appointed to draft resolutions in regard to the recent deaths of three of our number. The report of the committee is as follows: —

Inasmuch as it has pleased the All-wise Disposer of human events to remove from among us by death our much respected and esteemed fellow-workers and professional brothers, Drs. Alvin Smith, of Monson, Sanford Lawton, of Springfield, and Cyrus Bell, of Feeding Hills, it becomes our special and grateful duty to record our expressions of sadness at their decease.

Therefore, be it resolved, That this Society, fully appreciating its loss in the death of these members, would deeply imprint upon the memory its testimony to their moral and professional worth.

As officers and members of the Society they were efficient and faithful in their duties, and always active and interested in promoting and sustaining its best interests. Honorable and upright in their intercourse with its Fellows, they commanded and received their confidence and friendship.

As practitioners in their professional calling, each was the devoted physician, the self-sacrificing, sympathetic, and warm-hearted friend. Zealous and faithful in all private duties and virtues, they with equal devotion served the public in various offices with ability and fidelity; in fine, in all social and public dealings they acted in strict conformity to the great Christian principles of rectitude and justice.

In their loss the Society most freely accords its sympathy, and mingles its sorrow with their friends and the communities among whom they lived and labored. To the immediate families of the deceased the Society proffers its heartfelt regard and sympathy in this time of their bereavement.

Resolved, That a copy of these resolutions be sent to the families of the deceased, and inserted in *The Springfield Republican* and *Daily Union*, and also in the *Boston Medical and Surgical Journal.*

William G. Breck,
P. LeB. Stickney, } *Committee.*
S. D. Brooks,

George C. McClean, *Secretary.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 15, 1882, TO SEPTEMBER 22, 1882.

Wright, J. P., surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month, on surgeon's certificate of disability. S. O. 181, Department of the Missouri, September 8, 1882.

Hubbard, Van Buren, major and surgeon. Orders to Fort Wingate, New Mexico, revoked. To report to commanding officer, District of New Mexico, for duty at Fort Stanton, New Mexico. S. O. 174, headquarters Department of the Missouri, August 30, 1882.

Bache, Dallas, surgeon. Informed by Adjutant General of acceptance of his certificate of disability of August 31, 1882, on sick leave from September 1 to 30, 1882.

Boston Society for Medical Observation — A regular meeting of the Society will be held at the Medical Library, 19 Boylston Place, on Monday, October 2, 1882, at eight o'clock P. M. Reader, Dr. Dr. A. L. Norris. Subject, Dystocia: Observations on a Series of Cases. C. M. Jones, *Secretary.*

Original Articles.

WHAT CONSTITUTES A MEDICO-LEGAL AUTOPSY?[1]

BY S. D. PRESBREY, M. D.

AT the trial of Thomas McMullen for the murder of his wife, Annie McMullen, held before the Supreme Judicial Court in Taunton, in April, 1882, the question of the completeness of the autopsy in that case was made an important element of the defense. For the clearer understanding of the matter the principal points in the evidence bearing upon this question are here introduced.

Medical Examination of the Body of Annie McMullen, with facts learned on Personal Inquiry as to the Cause and Manner of Death, by Medical Examiner Dwelly, of Fall River. — At seven o'clock on the morning of July 25, 1881, I was informed by the police that Annie McMullen was lying dead at a house in the rear of 29 Canal Street. In company with the officer I immediately proceeded to the place. The body lay on a bed in a small room in the second story of the house. It was lying on the back across the bed, which was greatly disarranged. A pool of blood was on the cloth under her head, and blood was still slowly *exuding* from under the scalp from a wound in the side of the head. Her hair was matted and filled with blood, and several splinters of wood were entangled in it. The room had been closed till opened by the officer, and had a sickening odor and was filled with flies. Blood was spattered upon the walls, and soiled clothes, which had evidently been used in wiping the blood from the floor and walls, were lying about the room. I learned, on inquiry, that McMullen had on the day before (Sunday) beaten his wife, and that he had been in the habit of beating her. On finishing the view I ordered the body removed to the undertaking rooms of Waring Brothers. After having been authorized by Mayor Braley, and having requested the attendance of Drs. Brown and White as witnesses and assistants, I proceeded to make an autopsy at nine o'clock A. M. (The body when found was still warm about the abdomen and chest where covered with the bedclothes, but the face and extremities were cold. The day was very close and warm.) The body was stripped of its clothing, and the sticks and splinters removed from the hair and carefully preserved.

COPY OF THE RECORD OF AUTOPSY.

The body of a woman about five feet three inches in height, of medium flesh, and estimated to weigh about one hundred and fifteen pounds. Rigor mortis not well established. Death was considered to have taken place within twelve hours preceding autopsy.

The face was much swollen and discolored. Both eyelids were greatly distended and very dark in color from extravasated blood. The conjunctiva of the left eye was injected with blood. There was a wound in the upper lid of the left eye just under the brow and on the edge of the orbit of about one inch in length, extending through the integument. The head was extremely bruised upon the whole top and sides as far as the line of the ears, suggesting that it had been forcibly and repeatedly struck with some hard and blunt instrument. A wound through the scalp about an inch in length was found just above and behind the right ear, and upon the vertex another, one and a half inch in length, extending about half through the scalp. An extensive abrasion of the skin reached from the right brow and temple half way down the face. The backs of the hands and ulnar sides of the forearms were nearly covered with severe contusions and abrasions, and were very much discolored by extravasated blood. There were also several abrasions on the shoulders and on the chest at the top of the sternum. A severe contusion on the right side over the region of the liver measured seven inches in diameter. Both nates were bruised and discolored. Many other bruises and abrasions of less extent and severity were found on different parts of the body. All the above-named injuries were of recent origin.

Internal examination. On lifting the scalp there was found a large quantity of effused blood, covering the entire vertex and extending over the temples, filling completely the temporal muscles and the surrounding connective tissue. The scalp from the top and sides of the head was so swollen and filled with effused blood that it literally felt like a bag of jelly. There was no fracture of the skull, nor any internal appearance of injury to the brain or its coverings. The heart, lungs, and all the abdominal viscera were apparently healthy except the liver, upon the anterior surface of the right lobe of which were seen several small nodules. The right side of the heart was filled with coagulated blood. The stomach contained a very little fluid. Death resulted from shock, consequent upon the injuries to the head and other parts of the body.

Medical Examiner Dwelly testified in accordance with the record of the autopsy as given above, and that, in his opinion, death was caused by the shock of the repeated blows, no one of which might have been sufficient to cause death, but all of which together were the cause of shock which proved fatal. On cross-examination Dr. Dwelly stated that he made as complete an autopsy as is usual; that he examined the brain thoroughly; that he did not open the spinal canal; that the spinal cord is an organ; that he knew that injury to the spinal cord might produce instant death; and that after he had completed the autopsy he refused to allow Dr. Charles Terry to make an internal examination of the body.

(It is proper to state here that after the completion of the autopsy the counsel for McMullen made application to Dr. Dwelly to allow Dr. Terry to be present at the examination, not knowing that the work had been already done. As this was impossible, he then asked for the privilege of a second autopsy by Dr. Terry. This was refused, but it was agreed that Dr. Terry might view the body in the presence of the medical examiner and make such external examination as he desired.) Drs. Brown and White, who were the witnesses to the autopsy, substantiated the testimony of Dr. Dwelly. Mrs. Sullivan, and several other women living in the vicinity, testified to having heard the sound of blows with some hard, flat substance, many times repeated, and that with these sounds were mingled the cries of a woman.

Mr. Cummings, in opening the defense, used these words: "How good an autopsy was made by the government? We shall show you that it was incomplete. While the examiner looked in *three* places for the cause he neglected the *fourth*. He found the probable cause, but in cases like this we want to know what the actual cause was."

Thomas McMullen, the defendant, testified that he took a broom and hit his wife once or twice with it; that she went out in the evening for water; that he fell asleep, and awoke at four o'clock the next morning, and not seeing his wife got up and found her lying dead on the stairs; that he took her up and laid her on the bed. Cross-examined. Struck her and broke the broom-handle over her, and then used his hands. (The testimony regarding finding the body on the stairs was unsupported.)

Dr. Charles C. Terry, of Fall River, in his testimony mentioned the vital organs, and among them included the spinal cord. "The autopsy would not be complete without the examination of every vital organ. An examination of the spinal cord could not be made externally."

---

[1] Read at the Annual Meeting of the Massachusetts Medico-Legal Society, June 13, 1882.

Dr. Dwelly, recalled, stated that he examined the brain and also the upper portion of the spinal cord; that there was no fracture of the base of the skull; that the right side of the heart being filled with coagulated blood was an indication of the manner of death (shock), but not an infallible one.

Dr. Terry, recalled. "I do not think a sufficient examination was made in this case to ascertain the cause of death. I asked permission of Dr. Dwelly to make an autopsy, but he refused to let me. I noticed that the neck was swollen and discolored, and that the head was limp or loose; it wobbled about; it attracted my attention as something unusual. The neck should have been examined. In my judgment not more than six hours had elapsed between her death and the time of the autopsy." Cross-examined. "In an autopsy, if I found the cause of death in one spot I should look no further. The opinion of a medical examiner is always open to dispute."

Dr. George L. Keene, of Providence, R. I., testified that an autopsy would not be complete unless all the vital organs were examined; that if in making an autopsy he found the cause of death at once he should go no further, unless at the request of friends or to satisfy himself.

Dr. John H. Mackie, of New Bedford, testified that when the cause of death had been found it was not necessary to push an autopsy beyond that point. In this case he considered that the cause had been satisfactorily found.

Medical Examiner Presbrey thought the autopsy was complete, in that it established the cause of death, and that there was no more necessity of opening the spinal canal in this case than there was of examining the stomach and liver for poisons.

Thomas McMullen was found guilty of "murder in the second degree."

As it is the aim of the medical examiner to establish the truth, and to forward the cause of the broadest justice, it is of the first importance that his work should be such as shall command universal respect. To his direction the State intrusts the first steps in every trial for murder, and the autopsy which he makes may become the foundation upon which the whole trial is to rest. To us as medical examiners, then, no question can be more vital than that involved in the above trial, and which I have chosen as the subject of this paper.

If we seek an answer to the question in the derivation of the word autopsy, we shall find, to our disappointment, that it literally means *personal inspection*, simply, but throws no light on the method or extent of such inspection. It is evident from Chapter 200 of the Statutes of 1877, that a wide distinction should be drawn between a "view" and a "further examination" or autopsy, the former comprising an inquiry into "the cause and manner of the death," the latter a thorough and exhaustive examination of the body itself with the purpose of settling precisely the cause of death if such be possible; for in no case can the two terms, "view" and "autopsy," be considered synonymous, nor does the law specify any method of determining which shall be made, except to leave the question to the judgment of the examiner and the approval of the city or town officers. We must turn, then, for definition to usage, and to a consideration of the purpose and object of an autopsy.

Orth says, "Our object may be to ascertain the cause of death; in this case the examination must be thorough and methodical, otherwise an important point might be easily overlooked. It was formerly the custom to separate medico-legal from the so-called pathological autopsies, and in forensic cases to limit the examination to those changes which were immediately connected with the legal question at issue. But this was all wrong, for one can never know beforehand how important the morbid condition of any special organ may become during the course of the investigation, nor is one in a position to give a final and weighty opinion as to the fatal disease, the cause of death, or the condition of particular organs, unless each and every organ in its individual and associated capacity has been accurately studied and made out. For these reasons the new regulations for procedure in medico-legal cases in Prussia prescribe a careful and methodical examination and description of all parts of the body in their several relations, and at the present time a medico-legal is only distinguished from a pathological autopsy in that everything which may serve the ends of justice is treated with even greater accuracy and detail than is the case in an ordinary autopsy."

Virchow "drew particular attention to the necessity of insisting (in autopsies for medico-legal purposes, as in everything else now) upon completeness of examination and exactness of method, both in the investigation and in note-taking, so that it might be decided, subsequently, though not in anticipation, whether there was any significance or importance in what was observed, or whether it was accidental and unessential." Again, "a not insignificant portion of the administration of the criminal law is entirely dependent upon a correct and objective examination on the part of the medical jurist. It would, I am sure, be a matter of no difficulty to collect a great number of examples in which the faulty performance of the autopsy has rendered obscure cases in themselves clear and simple, and has made unintelligible those which were at all ambiguous."

The advice of Woodman and Tidy is pertinent: "Let your post-mortem examination be a thorough one. Do not, for example, make so serious a mistake as to neglect the examination of the *head*, because the death was a sudden one, and you found *heart* disease. Death is sudden in some cases of cranial hæmorrhage, and remember apoplexy may coexist with, or be caused by, poisoning." And in cases of poisoning "note all pathological appearances, for you must endeavor to prove not merely that the deceased died from poison, but that death did not result from natural causes."

Reese, in a note in the last edition of Taylor, remarks, "In medico-legal cases involving the question of life and death, the examination of the body of the deceased cannot possibly be too thorough and exhaustive; the omission of any one organ is a radical defect," and cites two cases that occurred in this country in 1872, in which the incompleteness of the autopsies became serious defects in the evidence at the trial, the one from non-examination of the spinal cord, the other from omission to examine the kidneys and other important organs.

Taylor says that "the great art of counsel who defend persons charged with murder or manslaughter consists in endeavoring to discover what the medical examiner omitted to do."

Thus we find that usage, as established by the best authorities, demands nothing less than the most thorough, exhaustive, and methodical examination of the body in medico-legal autopsies.

But it is, perhaps, desirable to study our subject more in detail. Section 8 of the Law of Medical Examiners requires that the examiner "shall make personal inquiry into the cause and manner of the death," and shall at the autopsy "carefully reduce to writing, or cause to be reduced to writing, every fact and circumstance tending to show the condition of the body, and the cause and manner of death." His first duty, then, is carefully to note the position and surroundings of the body when first found. To this investigation the circumstances of each individual case alone can set the limit. It is easy to imagine how facts so learned, apparently the most trivial, may prove to be of the first moment in the course of the trial, and though other officers of the law may also be expected to give attention to matters of this nature, it is none the less the duty of the medical officer.

We next come to the external examination. The facts to be learned under this division cannot be too carefully ascertained. They are often quite as weighty as those reached by section, and quite as likely to be appreciated by a jury. No simple survey of the surface as a whole should satisfy. The same exactness of method and thorough attention to detail should prevail here as in every other part of the work. After the marks of death itself have been noted, every region and each natural opening of the body should have a proper share of attention. The details of such an examination are most abundantly treated in Casper's Forensic Medicine.

There can be no question of the importance of the next division of the work, the internal examination, for too many are inclined to dwell upon this to the exclusion of the work mentioned above; hence I need call attention to no details, for any neglect here can only be attributed to inexcusable carelessness. My duty lies mainly in an attempt to define the limits of this work. All authorities are united in the opinion that under all circumstances the three great cavities, the head, the thorax, and the abdomen, should be opened and their contents minutely studied. As regards including in this list the spinal canal, authorities differ, but all again agree that not only the spinal cord but any and every part of the body should be examined if there is reason to think that important information can be gained thereby.

Woodman and Tidy, under the heading, How to Make a Post Mortem, after describing the examination of the head, say, "Now proceed to the examination of the spinal cord and its membranes," thus including this in the regular order of work. Beck says: "The vertebral column must be viewed throughout its whole extent, as to its being fractured, or dislocated, or contused. In doubtful cases it requires strict attention, since injuries to it are often of a very complicated nature." He then describes a case of fatal injury of the spine in the neck with no external indications, and remarks, "in such and similar cases it may be expedient to remove the whole of the cervical column." The history of this case was of course known to the examiner. On the other hand Virchow, in the reports of those cases which he makes to illustrate his method of medico-legal investigation, makes no mention of the spinal column, but is most exhaustive in his exploration of the three cavities. And yet one may read in the translator's preface to the same book, "they (the autopsies) may be taken as examples of the way in which all post-mortem examinations for medico-legal purposes should be conducted."

In the Edinburgh Regulations we read, "In commencing the dissection of the body, it must be laid down as an unavoidable rule that all the great cavities should be examined, and also every important organ in each, however distinctly the cause of death may seem to be indicated in one of them. It is right to examine the cavity of the spine, and at all events its upper portion, in any case where an unequivocal cause of death has not been discovered elsewhere."

The Method of the North Carolina Board of Health directs that "the opening of the vertebral canal, or of separate joints, is never to be omitted in cases in which any information may be expected from such examination." Taylor and Orth, and many other authors, seem to follow almost to the letter the idea of Casper, "that in every case in which it may seem important to open the spinal column it must not be omitted." Lastly, it would seem clear that so important an organ should not be passed by, if our decision upon the cause of death partakes of the nature of "diagnosis by exclusion." Should any other portions of the body not mentioned above seem to be capable of throwing light upon the investigation, they should be studied.

The question of poison and the necessity of employing a chemist is one that will arise, and to which the examiner must give a definite answer. The burden of proof rests in this case as in the question of opening the spinal column. All authorities giving directions for investigation in such cases commence with the clause "if poison is suspected." This suspicion may arise from the circumstances of the case if they be known, or may originate in the facts developed in the course of the autopsy. In either case the duty is clear to proceed to investigate for poison. It may be desirable also to do so in case the result of the autopsy is entirely negative, as it is hardly right to deny that the cause of death can be found by examination unless we are in condition to speak positively regarding poison.[1]

No mention has been made of the use of the microscope, though there undoubtedly are cases in which it may be used to advantage, but as a general rule the instrument is probably more useful in pathological than in medico-legal investigations.

In cases of infanticide, in addition to the search for the cause of death it is necessary to undertake such investigation as shall aim to give answers to each of the three following questions, namely: —

(1.) What is the age of the child?
(2.) Was the child born alive?
(3.) If born alive, how long did it live?[2]

Should suspicion light upon a person as being the mother of the child, the questions to be determined concerning her are: —

---

[1] See an article by Medical Examiner E. P. Miller, in No. 4, vol. i., of the Transactions of this Society, on the Conditions and Circumstances which should Induce the Medical Examiner to employ a Chemist.

[2] In this connection I cannot refrain from calling attention to Ogston's Lectures on Medical Jurisprudence, in which, in closing the subject of Infanticide, he gives "directions for the systematic conduct of the medico-legal inspection of the infant." In these directions all the details peculiar to such an examination are abundantly set forth.

(1.) Whether she has been delivered of a child?

(2.) Whether the signs of delivery correspond as to time, etc., with the appearances observed on the child?

In conclusion, then, we can say that the only absolutely fixed requirement of the Medical Examiner in making an autopsy is the investigation of the three great cavities, and that in addition to this he shall according to his judgment make his work so complete in every case as to be reasonably satisfied of the cause of death, or of the fact that the cause of death cannot be learned by an examination of the dead body.

◆

HEALTH OF CRIMINAL WOMEN.[1]

BY E. M. MOSHER, M. D.,

Superintendent Massachusetts State Reformatory Prison for Women.

THE word criminal, though commonly applied to the inmates of penal institutions, includes in its strict sense all persons who commit an offense against law, whether convicted or otherwise.

In America the number of such persons within the precincts of each State depends not only upon the amount of its population, the stringency of its laws, and the vigilance of its police force, but also upon the number and size of its cities, and the industries which it carries on.

Wherever men and women are herded together, as in the poor and squalid portions of large cities, or great numbers are employed at special work, as in our manufacturing towns, there will be found rife those influences which make criminals of men, and even more surely of women.

The physical condition of individuals often deteriorates, *pari passu*, with the moral nature, especially in those cases where intemperance and unchastity are the underlying vices.

To study the diseases of such a class with the hope of arriving at any but the most general conclusions seems a formidable task; and yet, since the inmates of our jails, houses of correction, and prisons are but representatives of a much larger number who walk our streets, scattering contagion, both moral and physical, and filling our hospitals and dispensaries with patients, it seems worth while to see what can be deduced by a careful examination of a number sufficiently large to represent the class under consideration.

The object of this paper is, therefore, to ascertain, if possible, the extent and direction of the influence which a life of crime exerts upon the health of individuals, and as our observations have been mainly confined to criminal women, we have limited our study to this class.

The statistics which we shall present have been taken from the records of the Massachusetts State Reformatory Prison for Women, and extend over a period of four years.

During this time 2196 women were committed to the prison for crimes, which, for the sake of convenience, we have classified under the following heads, namely, —

Class I. Offenses against person and property.
Class II. Offenses against chastity.
Case III. Offenses against public order.

The first class (offenses against person and property) includes all the cases of assault, fraud, larceny, arson, burglary, manslaughter, etc. In this class we find but 310 commitments. The larger number of these women were of foreign birth or parentage; their ages ranged between fifteen and fifty-three years; nearly all could read and write, and about half were unmarried. Many were sentenced for the first time.

In the second class (offenses against chastity) there were 515 commitments. A larger proportion were of American birth or parentage than in either of the other classes; most of them could read and write, and more than half were unmarried.

The third class (offenses against public order) includes the cases of drunkenness, vagrancy, disturbers of the peace, common railers and brawlers, idle and disorderly persons (which is but another name for either drunkenness or unchastity), etc.; 1271 such persons were committed. They were mainly of foreign birth. Among the number were many old women, though the average age was about thirty years. A large number could neither read nor write, and fully three fourths were married.

It is safe to say that of the whole number committed during the four years more than four fifths were intemperate, and more than three fourths were unchaste.

Turning now to the hospital record, we find 2076 cases of illness during this time. Some of these were readmissions of the same individual. A small proportion were infants, which, with the cases recorded under the head of "slight ailments," we have thought best to exclude, thus leaving 1704 cases of illness, of which a careful diagnosis was made, and a record of symptoms and treatment kept.

Upon tabulating these, we find syphilis to be the prevailing disease, three hundred and five cases being on record: To these might be added more than as many more, in whom the disease was not in a sufficiently active form to make their admission to the hospital a necessity.

With these figures before us it is safe to conclude that one woman out of every four committed to the prison was syphilitic. Thirty-two of these cases were found under Class I., one hundred under Class II., and one hundred and seventy-three under Class III.

Of the one hundred women sentenced for larceny, who were sick in the hospital during the last two years, eighty-six were known to be unchaste.

Next in frequency we find cases of alcoholism, of which there were one hundred and ninety-eight; of these one hundred and seventy-one were found in Class III., eleven and sixteen in Classes I. and II. respectively.

Twenty-five cases of delirium tremens occurred, all but two of which belong in Class III.

There were one hundred and thirty-nine cases of tonsillitis, which were very equally distributed among the three classes. One hundred and one of these occurred during the winter of 1878 and 1879.

Dyspepsia and rheumatism were common ailments, though but sixty-three cases of each were sufficiently acute in character to need admission to the hospital. The number treated from the dispensary was large. These patients were as widely distributed as the habit of intemperance.

---

[1] Read before the American Social Science Association.

Only thirty well marked cases of insanity were recorded during the four years, and several of these were recommitments to the prison of women who had been transferred to a lunatic hospital during a previous sentence. Twenty of the thirty belonged under Class III.; also twelve of the fifteen epileptics who found shelter in the hospital.

Paralysis, neuralgia, and hysteria prevail most largely in Class I. in proportion to the number of commitments; here, also, are found the greatest number of cases of anæmia and diabetes.

Of the seven cases of puerperal fever which occurred five belong to Class II. (offenses against chastity), also eight of the fifteen cases of masturbation placed under special treatment. Diseases of the eyes, malarial fever, miscarriages, and pulmonary consumption, occur in excess also in the second class. Of the last named affection there were in all twenty-eight cases, in most of which the disease was established when the women were committed to the prison.

But four cases of pneumonia and eight of pleurisy occurred. Twenty-one cases of bronchitis were treated in the hospital.

Seventy-two cases of uterine disease were sufficiently severe to need hospital care for a time; a larger number of women were able to work, but required medical supervision.

Coming now to the surgical patients, we find but thirty-two cases in Class I., against sixty-five in Class II., and one hundred and sixty-two in Class III. Abscesses and ulcers occurred in great numbers, as might be expected in a population like this. Rectal diseases also were common.

Twenty-four deaths occurred among adults at the prison during the four years; of this number, one died of alcoholism, two of apoplexy, one of brain softening, one of diabetes, one of œdema, and one of gangrene of the lungs, one of heart disease, one of enterocolitis, two of peritonitis, five of phthisis pulmonalis, one of puerperal fever, two committed suicide, and five died of syphilis. Seventeen of these were found under Class III., four under Class I., and three under Class II.

Among the cases of syphilis treated a great variety of conditions were observed. Many women came to the prison in the most revolting state possible, and in which they had, not infrequently, carried on their vile practices for months. Some of these claimed to have sought admission to the general hospitals, but had been refused because of the character of their disease. In other women the initial lesion was still present when they were committed to the prison. A number seemed healthy when they entered, but after a time manifestations of the disease in its later stages appeared. All these cases were treated systematically and thoroughly, with results favorable or otherwise, according to the virulence of the disease, the stage in which treatment was begun, and the length of sentence of the prisoner. The danger of contagion with so many syphilitics collected together was great, and complete isolation in many cases was an absolute necessity. If committed for less than two years they had to be set at liberty before the disease could be brought fully under control, perhaps to become again a source of pollution.

The condition called alcoholism, so often seen in our penal institutions, is one of general depression following long-continued stimulation by intoxicating liquors, with lack of proper food. It is manifested by trembling of the hands and tongue, twitching of the facial muscles, profuse perspirations, an unsteady gait, and incoherence of thought and expression. One woman out of every eleven committed to the prison was taken into the hospital in this condition. Under a nutritious diet, and rest in bed, these patients soon recovered sufficiently to go to work, but many returned to the hospital later on with some other ailment, most often dyspepsia or rheumatism, those strong allies of intemperance. Some of the cases of delirium tremens were exceedingly violent, but no deaths occurred.

Dyspepsia and constipation of the bowels were the two affections of the digestive tract most common among the prisoners, often taxing the skill and patience of the physician more than many severer maladies. Most of the cases of rheumatism were of a chronic character.

The small number of cases of pulmonary disease leads us to conclude that affections of the respiratory organs are not a necessary accompaniment of prison life; proper food and clothing, good ventilation, and a fair amount of sunlight being here, as everywhere, their best preventives.

There have been sixty-eight births at the prison; only one parturient woman died, although many were so diseased that their infants died before or shortly after birth.

Among the surgical cases indolent ulcers, mainly of the leg, were of frequent occurrence, often detaining women in the hospital for weeks who otherwise were able to work.

Some of the cases of rectal disease were of long standing and exceedingly severe in character, while others were so simple as not to need admission to the hospital during treatment.

An examination of the foregoing cases leads us to the following general conclusions: —

I. Intemperance and unchastity are the two vices which fill our penal institutions with women.

II. The influence of these vices is detrimental to health of body, increasing its susceptibility to disease, and lessening its recuperative power.

III. The diseases which follow as a direct result of these vices are syphilis, alcoholism, dyspepsia, rheumatism, and general anæmia.

IV. Morbid conditions of body react upon the moral nature, increasing and perpetuating the tendency to criminality; hence the importance of careful medical supervision as a reformatory measure.

V. More ample provision should be made in all large cities for the isolation and thorough treatment of venereal patients of *both sexes*, either by the addition of special wards to the general hospitals or by the establishment of hospitals for this class.

VI. The women who commit high crimes, that is, larceny, burglary, arson, manslaughter, etc., possess a more sensitive nervous organization than those who commit only offenses against chastity and public order.

— A metropolitan journal of wide if not select circulation contains the following choice advertisement: Wanted immediately, a good street-talker on medicine. One who can officiate in the office during the day. A man with a good presence and long hair preferred. Address, with references and salary wanted, ——.

PROGRESS IN DERMATOLOGY.

BY G. H. TILDEN, M. D.

MULTIPLE FIBROMATA OF THE SKIN AND THEIR RELATION TO MULTIPLE NEUROMATA.

AT the celebration of the twenty-fifth anniversary of the Pathological Institute, in Berlin, Von Recklinghausen contributed in honor of the occasion the detailed reports of two cases of multiple cutaneous fibromata combined with multiple neuromata, together with a very thorough commentary upon the same. The cadaver of a woman, fifty-five years of age, presented a countless number of cutaneous tumors, of various sizes, for the most part rounded in shape and pediculated. The larger ones especially were polypus shaped, and reached a size of five centimetres in length by four centimetres in thickness. These growths were most numerous upon the breast and belly, while upon the back they were of larger size and more thickly crowded together, being in the latter region almost all pediculated, and as large as a walnut. There were also many of these tumors upon the back of the head. They were covered with entirely intact and smooth skin; and many of them sent out processes into the subcutaneous tissues, which processes could be easily felt through the attenuated cutis. Some of the tumors were harder to the feel than others, and in the larger ones were to be distinguished localized spots of induration. The tissue of which these tumors were composed was whitish in color and moderately soft, lax, and transparent, often opalescent in appearance. Easily detached from the surrounding subcutaneous tissues, the tumors presented rounded protuberances which dovetailed into the latter. Many of these growths could be pulled apart, showing them to be made up of a looped and twisted net-work of bands of varying diameters. The meshes of this net-work were filled with a tissue similar to that forming the bands themselves, but softer and more ductile. Those tumors also, which were confined entirely to the corium, were obscurely plexiform in structure. On the trunks and branches of the cutaneous nerves, and of the nerves of the extremities, notably upon those of the lower extremities, were found multiple fibromatous neuromata. There were also discovered soft fibromata in the periosteum of the left tibia, and in the walls of the stomach and jejunum, small, miliary fibromata. The patient had stated that the cutaneous tumors had existed all her life, without causing pain or inconvenience, but was unable to say whether they had increased in size or number.

Upon microscopical examination the neuromata presented most plainly the characteristics of soft fibromata. There was not the smallest new formation of nerve fibres, and neither fatty degeneration nor disintegration of existing nerve fibres, these being well preserved and traceable through the thickest neuromata. There was evident, however, new (added) formation of connective tissue in long wavy bundles, very delicately fibrillated, containing small, somewhat flattened, and longish connective tissue corpuscles, and traversed by a widely meshed net-work of blood-vessels. The enclosed bundle of nerve fibres was but very slightly dissociated by the newly formed connective tissue, most of which was situated between the bundle of nerve fibres itself and its lamellated sheath.

The fibromata of the skin were made up of a translucent though viscous connective tissue containing cells of exceedingly small size, so that after staining, only the nuclei of the same were visible. These cells were more numerous than in the connective tissue of the normal corium, and the newly formed tissue itself much softer and less distinctly striated. The tongue-shaped protuberances on the under side of the tumors were found to contain, for the most part, altered sweat glands, sometimes hair follicles, and occasionally an entering nerve. The arteries involved in the new growth were thoroughly embedded therein, but still surrounded by a thin adventitia, while the epithelium lining the canals of the sweat glands was in immediate contact with the tissue proper of the tumor. The hair follicles as a rule were unchanged. The bundles of nerve fibres and the solitary nerve fibres present were naked, destitute of any connective tissue sheath, but showed no signs of pathological change. The coils of the sweat glands contained in the tumors were unrolled and separated, with in some instances decided elongation of the canal, which here and there contained masses and cylinders of hyaline substance. The smaller nodules in the corium consisted likewise of crumpled bands of finely fibrillated, cellular connective tissue. The skin covering the cutaneous tumors was stretched and thinned, but showed nowhere the localized enlargement of papillæ peculiar to warts.

The nodules in the walls of the stomach and intestine were made up of the same soft, cellular, connective tissue as the cutaneous tumors. Any connection between them and the nerves of the stomach and intestine was difficult of demonstration, but in two of these nodules were found large, rounded, granular bodies, destitute of nuclei, and regarded by Von Recklinghausen as probably cells of the plexus myogastricus in a condition of atrophy. Besides the above were found in the mesentery of the jejunum, and on the stomach, small neuromata situated upon nerve filaments. The growths in the periosteum of the tibia proved to be very soft fibromata, containing many blood-vessels and nerves.

A close connection if not identity in pathogenesis between the cutaneous fibromata and the tumors found upon the nerves is foreshadowed by the facts, that the new-formed connective tissue in both varieties of tumor is the same, and that fibromatous neuromata were often found incorporated with the cutaneous tumors entering into them from below. The starting point for the tumors of the skin is probably in the deeper layers of the corium, the vessels, nerves, sweat glands, and hair follicles affording paths favorable to the development of the pathological process.

With the idea that the netlike structure of the cutaneous tumors was due to the development of fibromata upon a cutaneous plexus of nerve fibres, the author examined this net-work with reference to the existence of axial nerve fibres, but as a rule without success.

A second case came under the observation of the author which aided materially in the solution of the problem as to whether all these tumors have a common origin, beginning as new formation of connective tissue around nerve fibres or bundles. The patient, a man forty-seven years of age, presented very much the same appearances as the first case, being covered with cutaneous fibromata. Along the course of several of the subcutaneous nerves also, were to be felt, under entirely unaltered skin, thickenings and indurations, in all probability false neuromata. Four tumors excised from the back of this patient showed, as in the first case, plexiform structure and combination with false neuromata. In these specimens the nerve fibres were found to extend through a great portion of the tumor unchanged. Starting from a nerve trunk which had already undergone fibromatous thickening, as far as the nerve fibres were traceable, they were seen to be surrounded by newly formed, soft, cellular connective tissue. In those portions of the tumor where the newly formed tissue was harder, more distinctly striated, and less rich in cells, the nerve fibres were not to be made out. There was no distinct line of demarkation between these two varieties of connective tissue, and the nerve fibres as they extended into the harder portions of the tumor, simply vanished without any trace of degeneration. Sweat glands, hair follicles, and sebaceous glands were absent.

Von Recklinghausen considers himself justified in assuming an identity of pathogenesis for all of these tumors, for the following reasons: —

First. That the two varieties of tumor were found associated in the same individual.

Second. That the new-formed connective tissue present in both varieties of tumor was of the same chraacter.

Third. That in the first case fibromata were found connected with muscular and visceral nerves as well as upon cutaneous nerves, and that the fibromata of the periosteum of the tibia were particularly well supplied with nerves.

Fourth. That in both cases the cutaneous fibromata were not uncommonly in intimate connection with nerve fibres.

He concludes that the multiple soft fibromata of the skin originate as false neuromata, and should therefore be designated as multiple neuro-fibromata. After discussing at length the ætiology of these tumors and their relation to other pathological processes in the skin, the author finishes in these words: —

"To return to the idea with which I prefaced these observations upon fibromata, namely, that the different connective tissue portions of the skin share in the production of new formations, not in equal but in typically different degrees. As this idea seems to win some support from the foregoing facts, I may venture to propose a tabulated schedule which shall indicate the predilection of different morbid processes, for diverse portions of the skin. There are associated: —

"(1.) The connective tissue sheaths of the nerves, vessels, and follicles: Neuro-fibromata, leprosy, and elephantiasis mollis.

"(2.) The lymph vessels: Lymphangio-fibromata, elephantiasis lymphangiectodes, and carcinoma.

"(3.) The serous cavities (*Saftspalten*) and caniliculi (*Saftkanälen*) belonging to the connective tissue frame-work of the skin and to the envelopes of the various structures contained therein: Acute inflammatory tumors, leukæmic lymphomata, tubercle, lupus, sarcomata, granulomata, and elephantiasis mollis, and dura.

"(4.) The veins: Chancre, small-pox, and erysipelas.

"(5.) The arteries and blood capillaries: Chronic inflammatory new formations, with a tendency to cheesy degeneration, certain granulomata and angiomata.

"By adding to this list callosity, hard (epithelial) warts, adenomata, neuro-papillomata, and icthyosis congenita, as peculiar to the epithelial layers of the skin, we include nearly all dermal tumors."

The book closes with a complete and condensed summary of all the hitherto published cases of multiple fibromata and neuromata.[1]

MYXŒDEMA.

Ord,[2] in demonstrating six cases of this disease before the International Medical Congress at London, emphasized the following as its peculiar characteristics: —

(1.) General swelling of the skin, unattended by induration of the same, and unaccompanied by albuminuria. The skin is everywhere rough, dry, and translucent. The œdema which is the cause of the swelling is not influenced by position (force of gravity), and does not disappear upon pressure.

(2.) Noteworthy smoothing out of all the lineaments of the countenance. Dark bluish-red color of the cheeks, which ceases abruptly at the edges of the eyes, and is in strong contrast with the paleness of the eyelids. A lifeless, inert expression of countenance.

(3.) The articulation of words is of characteristic slowness and incompleteness. The sluggishness of thought, of comprehension, and of emotion is annoying to the patient himself. The memory suffers. The disposition becomes more and more anxious and irritable. The senses of taste and smell are perverted. The sight remains unimpaired, and rarely is there any alteration of the sense of hearing.

(4.) The gait is feeble, and attended with shortness of breath. The patients stagger and sink upon the knees. Some allow the head to hang down upon the breast.

(5.) The bodily temperature is always below normal, and the patients are continually shivering.

(6.) The hair and teeth degenerate and are lost.

(7.) The connective tissue of the whole body is in a condition of peculiar swelling, reminding one of the tissue of the umbilical cord. The fibrillæ, cement substance ("*Kittsubstanz*") and nuclei of the same are in a state of hyperplasia, and the tissues contain large quantities of mucin. This condition of the connective tissue causes the disappearance of the cells of the parenchyma of different organs, as has been most clearly demonstrated in the thymus gland, liver, and kidneys, also in the brain, spinal cord, and muscles.

(8.) The disease attacks women much more often than men, usually at an age beyond thirty years. Pregnancy has no influence upon the disease, and syphilis and the abuse of alcohol are not causes.

Differing in opinion from others who seek for the cause of the disease in some affection of the nervous system, Ord considers the malady to be one of the connective tissue.

(9.) Death ensues in various ways, generally by reason of degeneration of the kidneys, with symptoms of uræmic poisoning, occasionally with maniacal symptoms or those of marasmus.

ACUTE CIRCUMSCRIBED ŒDEMA OF THE SKIN.

H. Quinke describes,[3] under this name, a disease which bears striking resemblance to so-called giant urticaria. The disease manifests itself by the appearance of œdematous swelling of the skin and subcutaneous cellular tissues in circumscribed spots, of from two to ten centimetres in diameter. These tumors show themselves most commonly upon the extremities in the neighborhood of the joints, but may also come upon the body and face, in the latter region more particularly in the lips and eyelids. The swollen portions of skin are not, as a rule, reddened, but are pale, rather translucent in appearance, and not sharply defined. The subjective sensation is that of tension, itching being rarely felt. The mucous membranes of the lips, soft palate, pharynx, and entrance to the larynx may also be invaded by similar swellings, and to such an extent that difficulty in breathing ensues. One case, in which were manifested gastric and intestinal symptoms, suggests that the mucous membranes of these organs may be also affected. In another instance repeated serous effusions into the joints took place. Coming on suddenly, and, as a rule, simultaneously, in different regions, these swellings, after an existence of from several hours to a day, disappear with equal abruptness. By reason of the appearance of successive crops of such lesions, the malady, as a whole, may be prolonged for several days or weeks. The general health is generally undisturbed, but in some cases there was indefinite prodromal indisposition, and during the existence of the eruption heaviness of the head, thirst, and diminution in the quantity of urine. A rise in the temperature of the body was never observed. Once having been attacked, the individual is subject to recurrences of the disease, usually in the same regions of the body, sometimes at regular, sometimes at irregular, intervals of time. The affection appears oftener in men than in women. The patients were, as a rule, healthy in other respects, some of them of nervously irritable temperament. In one instance the malady was inherited by the child of the patient, the disease manifesting itself during the first year of life. The disease is to be classed among the angio-neuroses. Prophylaxis consists in regulation of the general condition, more especially of the digestive functions. Atropine seems to be of some service. In several instances scarification was necessary on account of œdema of the larynx.

---

[1] Ueber die multiplen Fibrome der Haut und thre Beziehung zu den multiplen Neuromen. Berlin, 1882. Verlag von August Hirschwald.

[2] Monatshefte für praktische Derm., April, 1882, p. 51.

[3] Monatshefte für praktische Derm., 1882, No 5, p. 129.

PATHOLOGY AND TREATMENT OF RHINOPHYMA.

According to Dr. Hans v. Hebra,[1] histological examination shows the normal elements of the skin in a condition of distorted, irregular hypertrophy. The structures in which this hypertrophy is most manifest are the blood-vessels, connective tissue, and the sebaceous glands, notably the latter, which attain gigantic size, and become transformed into cyst-like bodies. The epithelial layers covering the papillæ are the only tissue not participating in the pathological process. Contrary to Wilson's opinion, the affection has nothing in common with elephantiasis Arabum. Rhinophyma never originates with, nor is accompanied by, inflammatory processes, while the true elephantiasis Arabum consists essentially in hypertrophy of connective tissue, due to repeated attacks of erysipelatous inflammation, and in the resulting chronic œdema of the parts. In elephantiasis the œdema, especially in the more recent cases, is so great that upon incision into the diseased tissues, large quantities of albuminous fluid escapes, which is never the case in rhinophyma. In the latter disease the tissues are not soaked with fluid like a sponge, but show infiltration merely of embryonic cells. In elephantiasis the corium and papillary layers of the skin take but little share in the pathological process, which is confined to the subcutaneous tissues, directly the opposite being true of rhinophyma, so that periostitis and consequent new formation of bone, so common in elephantiasis, does not occur in rhinophyma.

The treatment followed by the author with encouraging results, consisted in paring down the excrescences upon the nose, and carving as good a looking feature as possible out of the shapeless mass. By reason of the existing dilatation of blood-vessels, the bleeding is often excessive, but may always be controlled by compression. Subsequent treatment is symptomatic and antiseptic, the raw surfaces eventually becoming covered with a layer of sound epidermis, showing here and there only, traces of cicatricial tissue.

LUPUS.

The following conclusions are given by Dr. Raudniz,[2] as the result of the statistical examination of two hundred and nine cases of lupus. Neither anatomically nor clinically can a difference between scrofulous and idiopathic lupus be made out, the disease appearing in the same form in already scrofulous and in entirely healthy individuals. A combination with inherited tuberculosis is only discernible in from ten to fifteen per cent. of all cases. The abscesses of the lymphatic glands, so frequently met with in scrofula, are almost never found in lupus. A contemporaneous manifestation of lupus in blood relations is seen only in the rarest instances, and hereditary transmission of lupus from parents to children perhaps never takes place. The infrequency of association between lupus and pulmonary tuberculosis decidedly speaks against the identity of these affections. On the other hand, the facts that in at least thirty per cent. of the cases observed, lupus was developed upon or only in the neighborhood of cicatrices due to scrofulous disease, or upon mucous membranes already changed by catarrhal processes; that in twelve cases injury, and in eight cases local attacks of erysipelas were given as exciting causes of the disease, would indicate that lupus is often due to a localized, specific predisposition, the nature of which is entirely hypothetical. The small proportion of cases, seventeen in number, in which lupus was found in combination with often trivial affections of the skin, contradicts the assumption that in lupus we have to do with a generalized predisposition of the skin to pathological changes.

CURE OF LICHEN RUBER ACUMINATUS WITHOUT THE USE OF ARSENIC.

Unna[3] from his experience is of the opinion that lichen ruber is amenable to external treatment alone. The usual method, introduced by Hebra, that of internal administration of arsenic, although efficient, is very slow, demanding months for its completion, improvement rarely being manifest before six weeks. By the inunction of a salve containing corrosive sublimate and carbolic acid, the author has cured six cases in periods of time varying from eight days to three weeks. The length of the treatment bears definite relation to the previous duration of the disease. Two cases of eight days' standing were well in eight days; two cases of from four to six weeks' duration demanded treatment for two weeks; while two cases, which had lasted six months and a year, required continuous inunction for three weeks. The following is the formula for the salve, which morning and evening is to be plentifully rubbed into the whole body, the patient being kept in bed between woolen bed clothes: —

---

[1] Vierteljahresschrift für Derm. und Syph., viii. Jahrgang, Heft 4, p. 603.

[2] Vierteljahresschrift für Derm. und Syph., ix. Jahrgang, Heft 1, p. 81.

[3] Monatshefte für praktische Derm., 1882. No. 1, p. 5.

℞ Hydrarg. bichloridi corros. 0.5–1.0, acidi carbolici 20.0, ung. zinci benzoat. 500.0. Diachylon salve may be substituted for ung. zinci, and in cases where there is much thickening of the epidermis, ten grammes of creta p. p. may be added to the salve.

This treatment was in every instance well borne. Mercurial stomatitis was avoided by the free use of a solution of chlorate of potash as a mouth wash and painting the gums with various astringents. The urine peculiar to carbolic acid poisoning was seen by the second day in almost all the cases, and a transitory and trivial feeling of weakness manifested itself on the third or fourth day. This, however, is fully offset by the fact, that after the use of the salve for a day or two the patients were well in other respects and enjoyed sound sleep, thus regaining their former strength, which had become impaired by loss of rest due to intolerable itching. In milder and more circumscribed forms of the disease the inunction is only necessary at night, the patients attending to their work during the day-time. Whether this method of treatment is equally competent in cases of lichen ruber planus remains to be demonstrated.

ACTION OF SALICYLIC ACID UPON THE SKIN.[1]

When applied to the skin salicylic acid is an agent causing the elevation, without the formation of a blister, of normal or pathologically thickened epidermis, in the form of a consistent whitish colored membrane. The line of separation is always within the epidermal layers of the skin, and the stronger the solution of the acid, the deeper down (nearer the papillary layer) does dissociation take place. The author has never seen a moist, serum exuding surface result from the application of the acid. For all forms of callus, with or without hypertrophy of the papillæ, for psoriasis palmaris and plantaris, non-specific as well as specific, and for every variety of epithelial accumulation or hypertrophy, salicylic acid, by reason of its being colorless, odorless, and unirritating as well as painless in its application, is the best keratolytic (causing separation of epidermis) agent. In order to be efficacious in this direction it should be applied not in the form of a watery, etherial, or alcoholic solution merely painted on, but in solution in collodion, ten per cent., or better still, as a salicylic plaster covered with gutta-percha, and left in position for from four days to a week.

VENEREAL AND COMMON WARTS.

Unna[2] recommends for the treatment of condylomata acuminata and ordinary warts the continuous application of unguent. hydrarg. containing five per cent. of arsenic. In the case of a young girl upon whose hands were a hundred or more warts, the unbroken application for three weeks of a plaster containing in each 0.2 square metre 10.00 grammes of arsenic and 5 grammes of mercury, caused entire disappearance of the disease without any irritation of the normal skin. Cure was effected not by reason of necrosis and destruction of the warts, as after the use of caustics, but by resorption, as in cases of spontaneous cure.

---

[1] Monatshefte für prakt. Derm., 1882. Band 1, No. 4, p. 128.

[2] Monatshefte für prakt. Derm., 1882. Band 1, No. 3, p. 96.

Hospital Practice and Clinical Memoranda.

DIFFICULT LABOR. PERINEPHRITIC ABSCESS. CARBOLIC-ACID POISONING.[3]

BY A. T. CABOT, M. D.

The following case presents several points of interest: —

(1.) The survival of the child after the long arrest of the after-coming head at the brim of the pelvis and the compression required for its delivery.

(2.) The occurrence of a perinephritic abscess in a puerperal woman.

(3.) The appearance of carbolic poisoning after the very temporary use of a weak solution of the acid.

(4.) The excellent effect of pilocarpine in restoring the action of the kidneys disabled by the carbolism.

Mrs. C., a small, slight woman, was confined in 1880 with a child at seven and a half months. Though the conjugate diameter of the pelvis was but nine centimetres, no trouble was experienced in this confinement, owing to the small size of the child. She became again pregnant, and on March 18, 1881, I was called to attend her in the birth of a child at full term.

The waters broke at the outset of the labor, and after twelve hours of good pains the head had not engaged in the pelvis. I therefore, with the advice and assistance of Dr. W. L. Richardson, performed version, having first etherized the patient. No difficulty was met until, the trunk and arms being born, the head was arrested at the brim. Traction as strong as I dared use failed to start it, and I accordingly applied the forceps, but my hands being fatigued by the version I soon resigned them to Dr. Richardson, who delivered the head after what seemed eight or ten minutes of violent exertion. The child at first made no effort to breathe, but after ten or fifteen minutes of artificial respiration breathing was established.

The uterus contracted well. Four stitches were taken in the perinæum, which had been somewhat lacerated.

The convalescence went on well with no untoward symptoms till the thirteenth day, when she was suddenly seized with a violent chill, and her temperature, which had been continuously normal, rose to 103.3° F.

She now complained of some pain in the right flank; and between the lower ribs and the crest of the ilium on that side there was a sense of resistance to deep pressure and considerable tenderness. In the evening of that day she had another severe chill, followed by fever, during which her temperature reached 106.5° F., and her pulse over 160.

A vaginal examination showed the uterus to be well contracted, returned almost to normal size, freely movable, and with no hardness or tenderness anywhere in its neighborhood.

An ice-bag was applied over the right side, and quinine was administered internally. From this time a distinct, circumscribed swelling slowly appeared, filling the right side between the lower ribs and the crest of the ilium, and extending forward to the outer edge of the rectus muscle. This whole region became flat upon percussion, and the flatness, extending back to the spine, surrounded and was continuous with the kidney dullness. This swelling did not increase steadily, but at times distinctly receded and became smaller and less painful, so that sometimes it seemed possible that it might wholly disappear. Examinations of the urine yielded no light as to its character. During this period of alternate increase and diminution of the swelling, extending over more than a month, the temperature remained always high, varying from 100° to 103° F. The stomach was very irritable from the first, so that at times for two or three days the nourishment had to be given almost wholly by enema.

---

[3] Read before the Boston Society for Medical Observation.

At one time also the patient was a good deal annoyed by severe attacks of asthma at night, which were speedily relieved by moderate doses of iodide of potash.

On the forty-first day from the initial chill, the swelling in the side, which had within a few days become distinctly more prominent and gave an indistinct sense of fluctuation, was aspirated through a point about three inches below the edge of the ribs and two inches outside of the right linea semilunaris, and twelve ounces of exceedingly fetid pus were withdrawn. The temperature at once fell, and for a few days remained between 99° and 100° F.

Eight days later the abscess had partially refilled, and the temperature had again risen to about 103° F.

I again aspirated, and drew off four ounces of pus similar to that first obtained.

In this aspiration I introduced the needle through a point further back, so as to favor the pointing of the abscess in that direction where the opening would be a dependent one.

No fall of temperature followed this aspiration, and five days later, the abscess pointing along the track of the needle, I made a free opening, and introduced a drainage tube. This operation was done under ether, and I was able to explore the cavity quite thoroughly with my finger. It had contracted to a size capable of containing three or four fluid ounces, and in the upper part was to be felt what I took to be the lower edge of the liver.

After this operation, which was done antiseptically, the temperature fell to about 97.5° F. The dressings were changed the following morning, and almost no discharge found. The tube being clogged, I injected a very little, not more than one ounce, of a solution of carbolic acid, of a strength of one to thirty. This seemed to escape readily and entirely. That afternoon she had several loose, black dejections, and soon after the appearance of the diarrhœa began to vomit. Her urine on the following morning was of almost inky blackness. The dressings were immediately changed, the abscess was washed out with liquor sodæ chlorinat. ℥i., aquæ ℥x., m., and oakum was substituted for the carbolized gauze. As the patient's strength was much reduced, nutritive enemata were given every two hours until the vomiting ceased, which it did on the following day. For some days sulphuric acid lemonade was freely exhibited with the hope of assisting the elimination of the carbolic acid from the system.

The urine continued almost black for four days, after which it was rather smoky for a week longer. As it cleared, however, it became very scanty, and on June 1st (seven days from the appearance of carbolic poisoning) not more than three or four ounces were passed in the twenty-four hours. One half a grain of nitrate of pilocarpine was given in two doses. Part of this was lost by vomiting, but considerable perspiration and salivation was produced. Four days later, the amount of urine having increased but little, one fourth grain of nitrate of pilocarpine was administered at night by the rectum, and followed by a good perspiration. In the morning she passed four ounces of urine, and from this time the function of the kidneys was restored.

At no time could anything abnormal be detected in the urine by chemical or microscopical examination.

From this time she improved gradually though with constant drawbacks, due to the very sensitive condition of her stomach, accompanied at one time by marked icterus. The abscess healed readily, and was entirely closed in four weeks from the time of opening. For some time, however, there were occasional sharp, griping, and cramp-like pains in the right side, accompanied by constipation. I suspected these to be due to some obstruction of the ascending colon at the site of the abscess, and they were always relieved by small, continued doses of castor oil.

Now, a year later, both mother and child are in excellent health.

Reports of Societies.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

DR. C. B. NANCREDE, RECORDER.

THURSDAY evening, September 7, 1882. Vice-President, J. SOLIS COHEN, in the chair.

CASE OF CARCINOMA MAMMÆ.

Presented by Dr. C. B. Nancrede for DR. CHAS. WIRGMAN.

Mrs. Josephine M., aged forty-eight years; married at twenty-three; the mother of three children, the last born sixteen years ago. Had nursed all her children, but the last died from marasmus, owing to the small amount of milk the mother had, although lactation was free after the first two confinements. She never had had any abscess of breast, traumatism, or eczema of the nipples, although she had always experienced pain and uneasiness in the right breast when nursing. There was no trace of carcinoma in family history. A sister had had an enchondroma of one of the metacarpal bones. When young the patient had suffered from dyspepsia, and on one occasion had had an attack of hæmoptysis. Of late years Mrs. M. has grown very stout, although never robust nor strong. About the middle of June, 1882, she first noticed a lump in her right breast, at its upper inner quadrant, about the size of a hen's egg. A few nights previously she had been awakened by a severe lancinating pain in the right breast, but experiencing no further inconvenience she paid no attention to it. The mass did not seem to grow till handled and an exploring needle had been inserted, when the growth became softer, much larger, painful, and the skin and superjacent veins rapidly showed marked changes. I saw her August 6, 1882, with Drs. Wirgman and Hearn, when the only additional points to be noted were that the growth was freely movable with the breast upon the chest walls, and that a mass the size of a pigeon's egg could be felt in the axilla, under the outer margin of the pectoralis major muscle.

Dr. Wirgman removed the whole breast by two semicircular incisions, opened up the axilla, and removed all the glands up to the clavicle. This operation, again, emphasizes what Dr. S. W. Gross has specially insisted upon, namely, that although the axillary glands may appear before operation uninvolved, that when the axilla is opened numbers are often found enlarged. This accords with my own repeated experience. Although slow in healing, the case has done well since operation.

This case presents special points of interest, which I shall now dilate upon. In the first place, its history and appearance were eminently suggestive of a rapidly forming sarcoma, which was either cystic or, what at once suggested itself to me before etherization, one into whose substance hæmorrhage had occurred. Upon careful examination under ether, the discovery of the enlarged gland at once suggested the strong improbability of sarcoma, which view I abandoned. After the removal the macroscopic appearances once more threw doubt on the diagnosis, as there was, for at least one half, if not more, at the circumference of the growth, a distinct *appearance of a capsule*, and, as I had surmised, the tumor had been broken down by a hæmorrhage into its substance. Subjected to microscopic examination, the specimen was again puzzling, since sections of the first pieces embedded showed in every portion of their extent, with a few very slight exceptions, small spindle cells of a connective tissue type. Dissatisfied, I embedded a second piece, sections of which revealed a typical carcinoma of the soft variety. This again illustrates what I have many times insisted upon in this Society, namely, that either very large sections of growths should be made, as Dr. Seiler advocates, or sections from several and varied portions of the morbid mass should always be carefully examined. Dr. Tyson said that the presence of a capsule seemed to be clearly demonstrated.

RECURRING CARCINOMA OF MAMMA AND AXILLARY GLANDS.

Presented by DR. C. B. NANCREDE.

The patient, Mrs. F., aged thirty-seven years, from whom the specimens were removed, before the discovery of the primary tumor, about eighteen months back, was in perfect health, although from pecuniary losses she had undergone much mental anxiety since the Chicago fire. Hearing a vivid account from a friend of another case of carcinoma mamma, her mind became deeply impressed, and shortly after she discovered a growth in the upper inner quadrant of the left breast, which continued to grow until it had attained, at the time of the first operation, to the bulk of a small orange, namely, one year after her first discovering it. She lost much flesh from the time of the discovery of the growth. She had never suffered from any form of traumatism, had had no eczema of the nipple, and although she had borne one child a number of years back, and had suckled it, had never had sore nipples. There was nothing which could be fairly construed as an hereditary history of carcinoma. The primary operation had consisted in a removal of part of the breast. In less than two months after this a small nodule appeared in the cicatrix, while the axillary glands began to enlarge rapidly. On July 8, 1882, I saw her in consultation with Drs. R. R. Taylor and Harlow, when I found that there was a small nodule in the middle of the original cicatrix, while the axilla was occupied by the mass of indurated glands, which I here present. The growth partially embraced the axillary artery, since when the former was compressed the radial pulse was decidedly affected. Not being allowed to remove the whole breast, I freely excised the small recurrent growth, and after a tedious dissection removed the axillary tumor, laying bare the artery and vein for a space of over an inch, clearing everything out to the clavicle, and distinctly recognizing the coracoid process of the scapula. Although not the place for a clinical discussion, I cannot refrain from emphasizing the importance of the thoroughness with which this axillary dissection should be performed. Not a single gland should be left, enlarged or not. Properly conducted there is hardly any hæmorrhage, a vessel rarely requiring ligature. This case was treated on Listerian principles, but with a spray of acetate of alumina, and the wound was dressed with the same. There was no inflammation, heat, pain, nor subsequent induration, and, if I remember rightly, the case required but five dressings until the wound became superficial, and fewer would have been necessary had perfect coaptation been secured. One or two points, where stitches made marked tension, showed a surrounding skin blush, which disappeared on the removal of the stitch; immediately contiguous to this the wound edge looked as if made but a few minutes before, thus showing that the irritation of *tension* was the trouble, which, as before said, very rapidly disappeared when the deeply embedded stitch was cut. The temperature rose to 100.2° F. at the end of the first twenty-four hours, after which it remained under 100° F. The pain after the removal of the pressure of the button-stitches amounted practically to nothing, according to the patient's own statements, and it will be remembered that she had the experience of a former operation for comparison. I believe that this is the first case where acetate of alumina has been used in this city in a Listerian operation, and its success disposes of the absurd statement that carbolic acid *is* Listerism.

CARCINOMA OF STOMACH.

Presented by DR. J. H. MUSSER.

The clinical aspects of this case were so definite that when the man applied to the medical dispensary of the hospital of the University of Pennsylvania for treatment, early in April of this year, it was without difficulty that malignant disease was diagnosed.

He was a farmer of good habits, fifty-three years old, and previously in good health. For the last six months he had suffered from "weakness of the stomach" and general debility, which prevented him from working. He had lost much flesh, and had constantly a severe sickening pain in the epigastrium extending to the upper part of the lumbar region, which became much worse within an hour after eating. Appetite was poor, tongue clean and pale, bowels constipated, with troublesome flatulence. A tender, non-pulsatile, movable tumor extended across the epigastrium from the margins of ribs on one side to a similar site on the other, one inch and a half above the umbilicus. He presented an anæmic, cachectic appearance.

Dr. H. Plank, of Morgantown, took charge of the case, and wrote me April 21, 1882, that he was much benefited by the treatment instituted, but was confined to bed by sheer exhaustion. June 5th the doctor reported increased weakness and emaciation, and that the pain had extended along the left side to the same shoulder. He took but little nourishment, and he commenced vomiting June 10th undigested food, mucus, and grumous, purulent matter. He died June 28th of exhaustion, after a nine months' illness.

Dr. Plank kindly sent me the specimen I here present. One fourth of the pyloric end of the stomach is involved in the growth, which extends along the greater curvature for four inches. along the lesser two inches, and completely encircles the organ. The stomach walls in front of the disease were dilated, the muscular coat being hypertrophied, and the mucous membrane congested. The mass encroached upon the calibre of the viscus so as almost to occlude it. The tumor consisted of three nodules, one of which was ulcerated on its mucous surface, and presented the appearance of a scirrhus. The glands in the lesser omentum were diseased.

SPINDLE-CELLED SARCOMA OF THIGH.

Presented by Dr. J. Henry C. Simes.

The patient, from whom this specimen was removed, presented himself for admission to the Episcopal Hospital, on August 30, 1882. He is sixty years old, an Irishman, and gave the following history: Two years ago he first noticed at the lower and outer part of the thigh a small swelling which grew rapidly to the size of a hen's egg when it was removed. Shortly after the wound had healed, a second tumor was noticed in the cicatrix, having the same character as the previously removed growth. This was also removed by operation, and again, in a still shorter interval, a third similar growth was developed in the same locality, which was also removed by the knife. When admitted to my wards, there was found upon examination, at the lower and outer part of the thigh, a linear cicatrix about two inches long, beneath and adherent to which, as well as to the surrounding integument, was seen a tumor as large as a walnut, movable upon the deeper tissues, painless, dense, and irregularly nodular. There was no glandular enlargement observable. No other tumors were present. The tumor was readily removed, being adherent only to the overlying skin, which was included in the incisions. Microscopic examinations showed that the neoplasm consisted entirely of large spindle-shaped cells, which contained large oval nuclei.

THE AMERICAN GYNECOLOGICAL SOCIETY.[1]

THIRD DAY. MORNING SESSION.

Before the reading of the first paper resolutions were presented and passed complimentary to Dr. Chadwick, the retiring secretary, recognizing his faithful service in that capacity since the founding of the Society.

The first paper was upon

THE INFLUENCE OF HIGH-HEELED FRENCH SHOES UPON THE FEMALE FORM, AND UPON THE RELATIONS OF THE PELVIC ORGANS,

by Dr. S. C. Busey, of Washington, D. C. At the outset the author gave an exceedingly interesting historical *résumé* of the development of the shoe in civilization. The first use of the heel seems to have been to make a short man look tall. The peculiarity of the French heel is not its height nor its narrowness so much as its shelving forward, which brings the point of support under the plantar arch instead of under the calcaneum. The evolution of types of form is like that of types of character, and especially in the female form it is impossible to set up any standard as normal. The form of the individual is the product of education, age, pregnancy, maternity, stature, habits of carriage, mobility of joints, degree of natural curves, etc. Asymmetry is the commonest deformity. The actual effect of French heels is difficult to demonstrate with certainty, because one cannot experiment on two exactly similarly formed women, with the presence and absence of that factor.

Paget describes a perfect female foot as broad, full in the instep, with a well-marked great toe, and a slightly longer second toe, the little one being small or almost rudimentary. The foot should rest on the heel, the first metatarso-phalangeal articulation, and the phalanges of the toes. These points constitute piers whence spring the two arches which make up the foot. These arches are elongated in walking, first by downward pressure of the body, second by raising the toes. In a natural gait each of these piers, from the heel forward, successively supports the weight, giving a gliding, undulatory movement. The French heel displaces the posterior support, and both piers of the double arch strike at once, which is fatal to grace of motion. In standing normally the weight is supported by the calcaneum; with the French heel it is carried to the metatarso-phalangeal articulation. The instep is made higher, and the foot *shortened.* The individual stands as if upon an inclined plane, which fatigues the muscles, and leads to their atrophy. Moreover, the French heel impairs the arch by impinging upon it at one point, the keystone, whereas architecture teaches that if an arch need support at all, it should be applied equally to all parts of the arch. The axis of gravity is thrown forward at the foot. This is offset by throwing the knees forward and the hips back. It may be laid down as a rule that when any vertical curve of the body is increased it is followed by a compensatory secondary curve in the opposite direction, usually occurring in the nearest part possible. This compensatory curve induces another, and so on. Thus the woman's buttocks become prominent, her leg and thigh a little flexed, her abdomen and breast protrude, and her face may be carried upward. As the pelvic brim and the uterine axis form angles normally of sixty and thirty degrees respectively with the horizon, when the increase of the dorso-lumbar curve tilts the pelvis back, its plane becomes flatter, and the uterine axis approaches the perpendicular. Then the bladder fills in front of the uterus and further tilts it back. This occurs in short women in whom compensatory curves have thrown the neck back; but tall women, with a tendency to carry the head down, may get their compensatory balance by throwing the pelvis forward, increasing the angle of its brim with the horizon, and diminishing that of the uterine axis.

Dr. Barker said that this was all true in theory, and that women wearing French heels ought to suffer from uterine displacements. But a large experience with what might be called a "high-heeled" *clientèle* during the fifteen years that this fashion has been in vogue failed to show effects as marked as might be expected. The English ladies never have worn these heels, yet their gait is far from graceful. While the French, who are just beginning to give them up after so many years of use, are among the most graceful walkers, and French actresses and ballet-girls who are the most addicted to the fashion, have the finest carriage of any class of women in the world. The speaker had failed to find any particular pelvic disease as the effect of French heels.

---

[1] Concluded from page 305.

DR. THOMAS agreed as to the discrepancy between theory and fact on this point, and suggested that perhaps, as the health of woman's mature life was due so much to youthful influences, the immunity of these women depended on the fact that they were properly shod in childhood. He thought that the great benefit which lawn-tennis was exerting upon female physique was due, independently of the exercise it afforded, to the fact that it compelled the discarding of tight clothes and high heels.

DR. MUNDÉ challenged a statement of the essayist that the small intestine normally occupies Douglas' cul-de-sac, saying that the posterior wall of the uterus and the anterior of the rectum were in apposition.

DR. VAN DE WARKER said that authorities differed on this point.

DR. T. M. DRYSDALE, of Philadelphia, read the next paper on

THE OVARIAN CORPUSCLE: ITS ORIGIN AND CHARACTERISTICS.

This was in answer to criticisms made by members last year upon a paper of similar tenor. He first discussed the origin of the corpuscle, claiming that it was an epithelial cell of the inner wall of the cyst, which was cast off in an undeveloped, rudimentary state, owing to the great functional secreting activity of these cells. It is usually of a period anterior to the development of any nucleus, and shows evidence of partial granular degeneration. His principal points were that (1) this is an actual cell, (2) that it is distinct from the pyoid bodies described by Lébert, and (3) it is not identical with a cell described by Bennett in 1852.

MR. THORNTON, in discussing the paper, disagreed with the writer as to the priority of the cell over the nucleus in the process of development, and believed that the Drysdale corpuscle was the nucleus of a rapidly dissolving cell. He had found cells indistinguishable from this in cysts of the kidney, spleen, and omentum, and thought that for ordinary observers the corpuscle was not pathognomonic of ovarian cyst.

Adjourned.

The Society were entertained at luncheon by Dr. Chadwick.

THIRD DAY. AFTERNOON SESSION.

DR. E. VAN DE WARKER, of Syracuse, read a paper upon

THE MECHANICAL THERAPEUTICS OF VERSIONS AND FLEXIONS OF THE UTERUS.

Opinions were divided, said the reader, as to the value of mechanical appliances in the treatment of these conditions, and, among those who were agreed on this point, there was variance as to the best appliance. From his stand-point there was need of pessaries, but they must be used with intelligence and care. Too much was not to be expected of them. He considered, first, the natural limitations of the pelvis to mechanical appliances; and, secondly, the value of the various mechanical devices.

The problem presented is to raise a uterus nearly to the norm, or, at least, to relieve symptoms. Now, the uterus being a movable body, the norm cannot be absolute. A pathological condition may precisely resemble a normal condition of the uterus in angular inclination, and will only differ from it in respect to mobility. In version we have an immobility, from habit, not from fixation. If we improve the uterine condition we restore its mobility. In the use of mechanical appliances we must remember that these are limited by the necessity of uterine mobility, by the vagina itself, by the need of safety for the soft parts of the pelvis, and by the avoidance of harm to an organ, nerve, or vessel, of the pelvis.

(1.) There is normally extreme mobility of the uterus, since its supports are not attached to a fixed point upon it, and it does not move upon a fixed centre of rotation. Its position alters in respiration, articulation, coughing, change of posture, walking, and in abdominal expulsive movements. [Illustrated on the blackboard by copies of actual tracings taken with a mercurial manometer.] And pessaries must be adjusted to meet all these movements. The mechanical force of the uterus, under these circumstances, which may be exerted at any time, varies from one to seven pounds, the equivalent (according to Duncan's computation) of an easy labor. At least three quarters of an inch should be allowed for mere uterine mobility.

(2.) The limitations of the vagina are absolute, and cannot be evaded. The uterus cannot be lifted beyond what the vaginal walls will allow. If we carry the elevation of the uterus so far as to obliterate the vaginal folds, we have merely put it in a fixed position. The posterior and anterior version pessaries really act by drawing upon the posterior and anterior vaginal walls. The vaginal limitations are more marked in anteversion than in retroversion. What has been said is true of versions only, not flexions. There is no means dependent upon the vagina alone which will redress flexions. What relief is here obtained by such means is due to the mere uplifting of the organ.

(3.) The danger to the soft parts mainly arises from two causes. One is an imperfectly fitting pessary. And this is an insidious danger, since the misfit may gradually occur and ulceration take place before we know it; while erosion may be produced by a pessary too small as well as by one too large. The fitting of a pessary is a most important matter. The other danger is imprudence in the use of pessaries, which is mainly due to the willfulness or stupidity of the patient. The latter should be strenuously urged to consider herself as always under treatment so long as she wears a pessary, and be examined at frequent intervals.

(4.) Among the most marked injuries to the pelvic contents are those of the bladder and urethra. The rectum is rarely disturbed except by fecal accumulation and the production of piles. Dysmenorrhœa is a not infrequent result. There is liable to be pain in postural changes, which is never to be neglected.

The reader closed with a synopsis of a classification of all the known forms of pessaries.

DR. CAMPBELL objected to the use of the word "fit" as applied to the relation which should exist between the pessary and the uterus, since that implied a condition which would result in fixation of the uterus. Before any pessary can be used, the uterus must be replaced, and he advocated the knee-chest method of reposition. A pessary ought to be looked upon as a crutch, to be used as a support during the movements of the day, and to be laid aside during the night. A stem pessary should not be considered as a support at all, but as a splint to keep the uterus stiff while the broken hinge at the point of flexion is mending, during which period the patient should remain at rest. He agreed with the reader that no external support could straighten a flexed uterus. He considered an intra-uterine stem as a surgical appliance, dangerous, but necessary.

Dr. Wilson detailed the difficulties he experienced in dealing with uterine displacements. He often had to try several pessaries before getting the right one. The required dimensions could not be measured or estimated with any accuracy. He very rarely saw an anteflexed uterus derive any benefit from the use of a pessary. He felt that little harm could come from a too tight fit when he could pass his finger comfortably between the pessary and the vaginal walls. The uterus should be allowed perfect mobility, and the patient should have no consciousness from sensation of wearing a support. After all, he regarded the use of a pessary as an experiment in each case.

Dr. Mundé held that the first requisite was to determine what the normal position of the uterus is, and the second, what to do for it. Anterior displacements as a rule do not call for mechanical treatment unless accompanied by prolapse. He was not an enemy of stem pessaries, though he believed they required watching. A stem might be needed to straighten an anteflexed uterus, but the risks were quite commensurate with the benefit derived. In posterior displacements he could get no benefit from mechanical support. The genu-pectoral method of replacement of a retroverted uterus was sometimes successful in his experience and sometimes failed.

Dr. Lyman thought that each case needed its own pessary. He would take the Hodge pessary for example, and mould it to suit each case. Mechanical support, however, he regarded as but a small part of the treatment of displacements. He would determine, if possible, the cause of the malposition, and, after treatment of the cause, would hope to replace the uterus with a reasonable prospect of its staying without foreign support. Pelvic cellulitis he regarded as at the bottom of the whole trouble.

Dr. Van de Warker reasserted his belief that a stem was the only practical method for anteflexion, though it needed care. He doubted the value of the ability to pass the finger between the pessary and vaginal walls as a test for the fit of a pessary, since the conditions were altered by change of position. He admitted the difficulty of fully explaining the action of the Hodge pessary, which he considered both lifted the fundus and also drew on the anterior vaginal wall by the cervix.

On motion of **Dr. Wilson** a resolution of sympathy with Dr. D. H. Storer, of Boston, an honorary Fellow of the Society, was passed.

The retiring president, **Dr. Emmet**, after a few valedictory words, introduced his successor, **Dr. Kimball**, of Lowell, who expressed his thanks to the Society for the honor conferred upon him.

On motion of **Dr. Wilson** a vote of thanks to the retiring officers was passed, and on motion of **Dr. Howard**, a vote of thanks to those who had entertained the Society.

RHODE ISLAND MEDICAL SOCIETY.

GEORGE D. HERSEY, M. D., SECRETARY.

A quarterly meeting of the Rhode Island Medical Society was held in Providence, Thursday, September 21st, the president, **Dr. Job Kenyon**, in the chair.

Dr. J. H. Eldredge, one of the delegates to the St. Paul meeting of the American Medical Association, presented an interesting report, especially of the work of the Section on Obstetrics.

Dr. W. E. Anthony gave an account of the annual meeting of the New Hampshire Medical Society.

Dr. W. O. Brown, a delegate to the Massachusetts Medical Society, read a *résumé* of the papers and proceedings of the last annual meeting.

Dr. J. H. Eldredge offered a few practical remarks on

TEDIOUS LABOR DUE TO RIGIDITY OF THE OS UTERI.

This condition is most often met with in primiparæ, and commonly those suffer most who are short and stout, and who have been in high health. It is a mistake to resort soon, in such cases, to efforts at mechanical dilatation of the os. Impatient meddlesomeness in the early stage of labor may result in severe lacerations of the neck of the womb. If the membranes are unbroken, and there are no special reasons for a speedy delivery, it is better to resist the importunity of the patient and her friends, and wait for nature to relax the os uteri.

As the pains increase in severity twenty grains of chloral may be given per rectum, and repeated if necessary. Chloroform was recommended as a useful anæsthetic during the first stage of labor. It should only be used, however, to produce a transient influence during a pain.

It is only in the later period of this stage that any manipulation is warranted. Attempts at assistance must not come too early, and must be practiced with care to be of any real help.

There is a border territory between the first and second stage of labor, when the pains have taken on a forcing character, and yet the os has not fully yielded. The head may be forced well down into the pelvis still covered with the lower segment of the uterus. It is then that manual dilatation, under an anæsthetic, is justified. When the parts are sufficiently relaxed the forceps may be used.

The venerable **Dr. George Capron** had intended to read a paper on

MISCARRIAGES,

but was too ill to attend. His paper was read by **Dr. W. E. Anthony**.

Among our most reliable resources for preventing abortion are rest in bed, a light diet, with cool acidulated drinks, opium, and cold applications. Viburnum prunifolium is probably valuable.

Ergot and matico were recommended as hæmostatics, as well as ice in the vagina, or a tampon of cotton saturated with a solution of alum.

In case a three or four months' placenta is retained, better let it alone; after the sixth month safety would be on the side of delivering it.

Dr. E. P. Stimson, of Tiverton, reported the results of 523 vaccinations on 481 patients. There were 257 primary cases, of whom 207 reported and were successful; 50 did not report. One primary case had been previously vaccinated thirty times without result, the thirty-first time was successful. Bovine virus was used. Of 220 secondary cases, 115 reported "successful," and 20 "no result."

Dr. E. T. Caswell reported five cases of

LITHOLAPAXY.

I. A man aged sixty. Operation one hour. Uric acid calculus. Weight of fragments one hundred and seventy-three grains. The patient walked a mile fifteen days after the operation, and four weeks later rode fifty-five miles in a wagon without discomfort.

II. A man aged sixty-nine. Uric acid stone. Fragments weighed forty-seven grains. This case was complicated by cardiac disease, on account of which the operation was for a while postponed. Successful.

III. A man forty-seven years of age. A stone was detected in the prostatic urethra, seven and one half inches from the meatus. Under ether the stone slipped into the bladder, where it was easily seized. Weight fifteen grains. The stone was composed of a piece of bone as a nucleus incased in a soft shell of phosphatic deposit. No history of syphilis, abscess, or accident. The patient got well, and was out in ten days. Seven weeks after the operation he had an enlargement of the perinæum, which Dr. Caswell opened, but found no pus. Two weeks later the probe detected dead bone at the bottom of the sinus.

IV. A woman, aged fifty-one. Operation forty minutes. Fragments weighed, dry, one hundred grains. Rapid recovery.

V. A man, aged fifty-nine. Operation two hours. Two stones composed of uric acid with nuclei of oxalate of lime. Weight of *débris* 1040 grains wet, 815 grains dry. Patient out in a fortnight.

Dr. D. E. Cone reported a case of impassable stricture of the urethra, with numerous fistulæ around the penis, scrotum, and perinæum. External perineal urethrotomy without a guide was done successfully.

Dr. E. M. Snow presented for distribution copies of his report upon births, marriages, and deaths in Providence during the year 1881, being his twenty-seventh annual report upon this subject.

During the year 1881 there were 2803 births, 2145 deaths, and 1202 marriages reported in Providence.

Dr. C. E. Woodbury, of Providence, superintendent of Rhode Island Hospital, and Drs. G. F. Bliven and F. T. Rogers, both of Westerly, were elected Fellows.

Recent Literature.

On Ovarian and Uterine Tumors; their Diagnosis and Treatment. By T. Spencer Wells, Vice-President of the Royal College of Surgeons of England, etc. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1882.

This is what might be called a second edition of Mr. Wells's Diseases of the Ovaries, published in 1872, with the addition of several chapters on uterine tumors and on excision of the uterus more or less complete. Most of our readers will agree with the opinion expressed by Dr. Henry Savage, of London, in the dedication of his beautiful work on the Anatomy of the Female Pelvic Organs: "To Thomas Spencer Wells, for more than a quarter of a century my colleague at the Samaritan Hospital, through whose genius alone the ovarian operation ceased to be a surgical disgrace and abdominal surgery a terror." The book opens with an introductory chapter on the reproductive cell, the ovary, and the ovum; then follows a long chapter on the different kinds of ovarian tumors and their natural history.

The second chapter treats of the diagnosis of ovarian tumors, and the methods and means of distinguishing them from other abdominal enlargements. In this chapter all the abdominal tumors and swellings which could possibly be mistaken for an ovarian cyst are enumerated. The medical treatment of ovarian tumors is very properly disposed of in a short chapter of four pages. The palliative treatment of these tumors is next described, and the various surgical procedures which were formerly advocated to destroy them when the physician wished to try any means except excision. The younger generations of surgeons, who know that ovariotomy is done nearly every day with almost uniform success, can hardly conceive of the bad odor in which the operation stood twenty-five or thirty years ago, when Dr. Keith in Edinburgh was almost literally followed by the coroner — the same Dr. Keith who has recently had seventy-nine successive successful ovariotomies.

Chapter V., on the rise and progress of ovariotomy, is extremely interesting. It was owing to the lectures of John Bell in Edinburgh, in 1794, that Dr. Ephraim McDowell, of Kentucky, performed ovariotomy in 1809 with a successful result. The claim that Dr. McDowell was the earliest ovariotomist can never be reasonably questioned, and is now allowed throughout the civilized world. Since McDowell's time the operation has been performed everywhere, but it is only within the last sixteen or seventeen years that it has been unreservedly accepted, and very much of this success is due to the author of the book before us.

Chapter VII. describes the preparation of a patient for ovariotomy, the duties of the nurse, and the description of the necessary instruments. Mr. Wells is an advocate of Listerism, and believes in the spray, and attributes his improved percentage of recoveries of late years to the rigid observances of Listerism.

Another chapter is devoted to a description of the operation, and another to the treatment of the pedicle and of the abdomen and its contents after the cyst has been taken away.

The remainder of the book, so far as it relates to ovarian disease, discusses double ovariotomy, ovariotomy performed twice on the same patient, the treatment of patients after operation, incomplete operations, exploratory incisions, and the subsequent history of patients who have recovered.

As ovariotomy has opened the way for abdominal surgery, it has of course encouraged the ovariotomist to attempt the removal of uterine tumors of various kinds. Mr. Wells gives his experience in the surgery of uterine tumors in the last fifty pages of the book. We are inclined to think, however, that as time goes on there will be fewer removals of the uterus for cancer, and that removal of the ovaries, Fallopian tubes, and broad ligaments will be substituted for removal of the uterus in the case of uterine fibroids. At present the balance of evidence seems in favor of Listerian ovariotomy; but if the results narrated by Mr. Lawson Tait and others can be accepted, this is open to doubt, and we may dispense with the spray and with chemical antiseptics. At the present time, however, our results are so good with Listerism that we are unwilling to dispense with it. It is to be regretted that the book has no index. This is so rare in an English publication that one is very much surprised at the omission. Any surgeon or physician, whether an ovariotomist or not, will find much to entertain and instruct him in Mr. Wells's treatise.

Medical and Surgical Journal.

THURSDAY, OCTOBER 5, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR 1880.

THIS bulky octavo of eleven hundred and odd pages, just received, contains many things of interest to the medical profession, and treats of many subjects in the shaping of which physicians, more, perhaps, than any other class of the community, should make their influence felt.

The commissioner states that the present year has been marked by a great increase in the amount and value of the information received at the office with reference to the conduct of education in our own and in foreign countries, and by a corresponding increase in the public demand for the distribution of information. The means allowed the office for carrying on the interchange of intelligence are entirely inadequate, whether regard be had to specific inquiries or to information which should be published in the general interest of this department of public affairs.

Seven circulars of information and six bulletins have been published during the year, comprising among others the following subjects: College libraries as aids to instruction; rural school architecture, with illustrations; English rural schools, with illustrations; a report on the teaching of chemistry and physics in the United States; vacation colonies for sickly school children; the Indian school at Carlisle Barracks; industrial education in Europe; medical colleges in the United States.

The number of American correspondents of the office, including officers of State and local systems and institutions of learning, is 8231, or more than four times the number at the beginning of the present decade. To the material derived from these sources must be added the foreign matter, reports, and periodicals, all of which must be examined and summarized for the report.

The commissioner gives in tabular form a comparative statement of the number of schools of medicine, dentistry, and pharmacy reported to the office each year from 1870 to 1880 inclusive, with the number of instructors and students. Such schools are classified as "regular," "eclectic," and "homœopathic." The table we reproduce: —

	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Institutions.	63	82	87	94	99	106	102	106	106	114	120
Instructors.	588	750	726	1148	1121	1172	1201	1278	1337	1495	1660
Students.	6943	7045	5995	8681	9095	9971	10143	11225	11830	13321	14006

From this we see that the number of institutions, of instructors, and of students were just about doubled during the eleven years, whilst the population of the country increased only about 25 per cent. during the same period.

Of these schools 72 are designated as "regular," with 1131 instructors, 9876 students, and with $79,703 income from productive funds, and $392,784 income from tuition and other fees during the year 1880; of the small total amount of income from productive funds $62,052 is credited to Massachusetts alone. As the total amount of productive funds is stated to be $199,306, it would seem as if the rate of interest were uncommonly favorable. The "eclectic schools" numbered six, with 65 instructors, 833 students, and receipts from tuition and other fees of $32,735. The "homœopathic schools" numbered 12, with 188 instructors, and 1220 students, their income from tuition and other fees being $33,258. There were 16 dental schools with 219 instructors, 730 students, and an income of $91,240; and 14 pharmaceutical schools, with 57 instructors, 1347 students, and an income from fees of $27,842.

The grounds, buildings, and apparatus of the "regular" schools were valued at $1,929,170; of the "eclectic" schools at $221,000; of the "homœopathic" schools at $185,000.

In speaking of the condition of medical education and the improvement in medical training the commissioner says: "From time to time in my annual reports I have discussed such topics or mentioned such facts as would serve to convey a correct idea of the progress and condition of medical training in this country. The improvement has been gradual, but some progress has been made in the right direction.

"Ten years ago only one medical school in the United States had a course of instruction extending over three years; now there are several. Then more than half the schools really required no more than attendance on one course of lectures; now only a small number venture to announce such laxity, however low, their real standard may be. Then preliminary education and entrance examination, though much talked about, were not insisted on except in a very few instances; now several schools require a better preparation and encourage educated men by special inducements to enter their walls. Then graded courses of instruction were hardly heard of; now they are common, and commonly advised if a choice of course is afforded. Special opportunities for graduate study have arisen at several points. The profession has been roused to some self-activity by these and other events, which is, perhaps, the most hopeful sign of all I have mentioned.

"The profession has been overcrowded to such an extent for so many years, chiefly because of the scandalous ease with which men imperfectly educated, or not educated at all, have been able to assume its titles and attempt its duties, that I do not know whether the increased admission of women during the last decade is to be considered as an advance in the right direction or not."

The commissioner then refers to the satisfactory progress made by several States in legislation in medical and sanitary matters; he considers that the good done by the various State Boards of Health cannot be estimated, and that the influence of their work should be increasingly felt in every public enterprise and on public intelligence in all parts of the country. Massachusetts is given the credit of imparting the first impulse by example as well as by precept to these organizations.

Fifteen nurse training schools reported fifty-nine instructors, 1303 pupils since organization and 323 in attendance, with 663 graduates, of whom 157 belonged to the class of 1880. The growth of the schools is briefly noticed, the need of their training emphasized, their facilities for instruction mentioned, and their value to private families shown.

In regard to the general school education of the young we note the following items: —

From the statistical summary generalized without reference to States, it appears that the total school population was, for thirty-eight States, 15,351,875; for eight Territories, 184,405; the number enrolled in the public schools was, for thirty-eight States, 9,680,403; for ten Territories, 101,118; the number in daily attendance was, for thirty-four States, 5,744,188; for eight Territories, 61,154; the number of pupils reported in private schools was, for twenty-one States, 561,209; for four Territories, 6921; the total number of teachers was, for thirty-eight States, 280,034; for ten Territories, 2610; the number of male teachers was, for thirty-five States, 115,064; for eight Territories, 948; the number of female teachers was, for thirty-five States, 156,351; for eight Territories, 1306; the total public school income was, for thirty-eight States, $82,684,489; for ten Territories, $1,255,750; the total public school expenditure was, for thirty-eight States, $78,836,399; for ten Territories, $1,196,439; the permanent school fund was, for thirty-three States, $119,184,029; for two Territories, $3,694,810.

The expenditure per capita of the school population varies from ninety-six cents in Alabama to $14.91 in Massachusetts; the expenditure per capita of enrollment from $1.12 in North Carolina to $17.80 in Colorado. The percentages of enrollment and average daily attendance are highest in Massachusetts and lowest in Louisiana.

There are sixteen different school ages in the States and Territories, seventeen years being the longest period and six years the shortest. The earliest age at which children are admitted to the public schools in any State is four years. In ten States and one Territory the school age is from six to twenty-one, and in seven States and three Territories from five to twenty-one.

The statistics of public schools in 244 cities, comprising about one sixth of the whole school population, one tenth of all the teachers, and more than one fourth of the annual school expenditure reported for the entire country, present the following totals: Total population (census of 1880), 10,700,800; school population, 2,661,498; number of school buildings, 4042; number of sittings for study, 1,029,616; number of teachers, 29,264; pupils enrolled, 1,710,461; average daily attendance, 1,105,763; estimated real value of property used for school purposes, $88,914,413; total receipts, $27,489,304; total expenditures, $25,074,360. The average expenses per capita of daily average attendance for instruction and supervision vary from $5.83 in Carbondale, Pa., to $25.88 in Virginia City, Nev.; and for incidental expenses from $1.02 in Carbondale, Pa., to $11 in Sacramento, Cal.

The great importance of attention to school hygiene and to the construction of Sanitary school buildings is recognized in the report, and the commissioner says: —

"Notwithstanding the numerous complaints of poorly constructed buildings, defective ventilation, etc., the last ten years have been marked by progress in all the sanitary conditions of school-houses.

"In many cities the care of these buildings is intrusted to special officers, and many reports include a representation of the actual condition of school buildings.

"The lack of competent architects, the indifference of the public, and the want of funds are the main obstacles in the way of the perfect adaptation of city school buildings to the convenience of the work and the requirements of health."

Reference is made in the report to Dr. Javal's interesting work on the physiology of reading and writing, which we are inclined to think is destined to have no little effect in modifying the printing of school books.

We are glad to notice that among other things the commissioner strongly urges the importance of thorough instruction in arboriculture or forestry.

◆

THE INDEX CATALOGUE. VOLUME III.

WE welcome with renewed pleasure the third volume of the Index Catalogue, which presents itself uniform in size and appearance with its predecessors. It brings down, perhaps one might say it exhausts, the alphabet through D. Its author titles number 9043; its book titles 8572; its journal articles 28,846; and in addition there are catalogued in this volume 4335 portraits under the heading Collection of Portraits. It is to be hoped that the future searcher for portraits will not be tempted, beyond his power of endurance, to use strong language, when he is obliged to turn back from Portraits to Collection in his search.

Perhaps the most striking point about this volume is the very large space taken up by the subject of Asiatic cholera, which covers one hundred and forty-eight pages. Nothing could better illustrate the importance of this scourge, or the *rôle* it has played in the world's history. If the mere index of its literature, in which but a single line may be the representative of the largest volume, fills so many royal octavo pages, who can give the actual number of pages covered by the original books and articles catalogued? How much of it is original work, and how much is parasitic copying no one will ever care to inquire. But after all this immense mass of material has been piled up, how much more do we know of the actual nature of the disease and the way to control it? Something of its natural history, undoubtedly, and something about its prevention, little about its actual entity and its cure. Perhaps we should, on the whole, find encouragement in that statement, for study is better than sloth as prayer is better than sleep, and a gramme of prevention is better than a decagramme of cure. (Unfortunately, in translating into the decimal weights it is difficult to preserve the exact proportion of the original without depriving the proverb of its terseness, an attribute almost as essential to the popular acceptance of a proverb as its truth.)

Cinchona and its derivatives of similar names cover five pages and a half. The clavicle shows its importance surgically by requiring six pages of the index. Climate covers but five pages, and cold an equal number. Cod-liver oil occupies the space of two pages only. Coffee fills a little less space. Colic takes up nearly nine pages, dropsy nearly the same space, dysentery about thirty pages, dyspepsia about six pages.

Few authors cover a page. Dzondi is one of the authors whose various writings fill nearly that space. Sir Astley Cooper hardly exceeds half a column.

Everything which has been said in praise of the wonderful undertaking on the appearance of the first and second volumes might well be repeated over the third. Our admiration increases with the succeeding volumes. The first, second, and third volumes bear respectively the marks of 1880, 1881, and 1882. Our gratitude over their creation takes the form of a hope that the fourth volume will appear in 1883.

MEDICAL NOTES.

— Our correspondent "Y" in last week's issue misses the point of what we had to say on "threatened" typhoid. The cases he cites (especially the first) illustrate the few instances in which, as we admitted, the use of the term was defensible. At the time when "Y" was advised to get away from the hospital he was in a relaxed condition, due to mental apprehension, overwork, unsanitary influences, or what not, and thereby in a most favorable condition for the reception of the typhoid poison which there was every reason to believe was then present in his surroundings. Hence it was wise to remove him from the exposure, and it was not absurd to say that at *that time* he was "threatened with typhoid." But these instances when the time and method of exposure can be definitely known are not common. As the expression is most usually and, as we believe, unscientifically employed, it is when the typhoid, if it be that at all, is at the end of its prodromal stage, that is, when it is a question between a fully developed typhoid which has passed through its period of incubation and a febricula or some other disease. To the patient the expression under discussion usually conveys the hope that the fever may be "broken up," while to the practitioner it means that two or three days more of watching will be necessary before he can tell whether the disease is typhoid or not.

— The *Daily News*, of Cumberland, Maryland, announces the arrival in that town of Dr. Edward H. Brigham, of Boston, and tells an interesting story of the cause of his visit, somewhat as follows: In 1863 Dr. Brigham, then quite a young man, was a private in the Thirteenth Massachusetts regiment, and was in the second battle of Bull Run. There he was captured, but was paroled and was sent, with a number of others, to Harper's Ferry and afterwards to Cumberland, where he arrived sick and very weak. While in this condition he passed the residence of Mr. Peter Hein, who lived near the camp, and leaning against the front gate asked Mrs. Hein for a piece of bread, and to be allowed to sit on the porch and rest. The good-hearted lady called her husband, and he came to the stranger. Although the soldier was unkempt and travel stained Mr. Hein at once saw that he was a refined gentleman, unaccustomed to such rough life. After he had conversed with young Brigham a few moments his heart opened to him, and he compelled him to remain, retaining him in the house for three weeks, when he returned him to camp strong and well. The kindness shown at that time has never been forgotten by the recipient, and for nearly twenty years a regular correspondence has been kept up.

— The morgue in Paris is now rendered less obnoxious to the first and second pairs of nerves of its living visitors by the introduction of a freezing apparatus, consisting of a modification of the Carré method, in which the cold is produced by the evaporation of previously liquefied gaseous ammonia. But instead of water a solution of calcium chloride, which remains liquid at a temperature of 20° F., is made the direct recipient of the cold thus generated, and is carried in pipes to the top of the building, whence it falls in cascades. The same fluid is again collected and reëxposed to the freezing machine. In this way the temperature of the room is kept well below the freezing point constantly. When bodies have become putrid or require to be kept longer than usual they are placed in a row of cases like a set of pigeon holes, where by means of the same apparatus the temperature is maintained at a much lower point. The bodies which have been kept at 20° F., and which have been for weeks of stony hardness, show very little tendency to putrefaction. The original cost of the whole apparatus was not less than £4000, but the expense of maintenance is insignificant (each pound of coal in Carré's machine producing ten to twenty of ice), and consists almost solely of the cost of fuel, the chloride and the ammonia being used and re-used indefinitely.

— It is rumored that Dr. Oliver Wendell Holmes, Parkman Professor of Anatomy in the Harvard Medical School, is about to resign the professorship which he has so long adorned.

— A successful operation for strangulated hernia is reported as having been performed at sea on one of the British Peninsular and Oriental steamships by the surgeon of the vessel. The hernia was of great size, and it was found necessary to open the sac; the operation was performed while the ship was running against a hard sea, was done upon the main deck in order to secure good light, and the after-treatment was carried on in a cabin where the temperature averaged from 86° to 90° F., as the state of the sea required the ports to be shut. Yet the recovery was uninterrupted and speedy.

— According to the researches of Kobert (*Archiv für exper. Pathologie*, B. xv., S. 22), which have been conducted in the laboratory of Schmiedeberg at Strasburg, the kreatin which exists abundantly in all extracts of beef has a remarkable effect on the muscular system, inasmuch as it increases its actual power and greatly extends its capability of continuous work. His experiments were made on frogs, and of many substances tested, besides kreatin, only hypoxanthin and caffeine possessed a similar action; and hypoxanthin is likewise a constituent of beef tea. Beef tea, therefore, if not so highly nutritious as it is generally assumed to be, is yet not so entirely useless as some observers would have us believe.

— The chemist of the Health Department of Brooklyn reports on the analysis of the water from twenty wells in that city, eight as very bad, seven dangerous, and four suspicious. The sources of contamination are not in the wells themselves but in the soil they drain. The report concludes: "These analyses show that nine tenths of the wells examined are more or less affected by the sewage of the city, and must be a source of constant danger to the health of those who use them."

— *Lyon Médical* reports a case in which a physician who had attended at a duel was subpœnaed to give evidence in court, and declined to answer the questions on the ground that what he knew was learned in his professional capacity and under the seal of secrecy that had been imposed upon him. His plea was adjudged fallacious on the ground that a promise to keep silence regarding a crime is illegal, and a refusal to answer being held equivalent to a failure to appear, he was fined a hundred francs and costs.

— The yellow-fever epidemic at the South continues unabated, though in Texas it has changed its location somewhat. Brownsville, which has suffered so severely, is now slightly relieved. Up to September 23d there had been in that town 1870 cases with 103 deaths. The disease is, however, creeping up the Rio Grande. At Pensacola the fever has been rapidly spreading during the last week of September, and up to the 30th ult. there had been 783 cases with 78 deaths. It is reported that here, contrary to the general rule, the negroes seem especially susceptible to the disease. The local Board of Health has one hundred and twenty paid nurses on duty, besides about two dozen Sisters of Mercy.

— An exhibition of rational dress is to be held in London under the auspices of the Rational-Dress Society. A prize of $150 will be given for the garb most nearly meeting the aim of the association.

— David Evans, of Wakefield, N. H., died September 29th at the age of one hundred and four years four months and five days. Up to the age of ninety-two he worked on his farm regularly with his men. Until within a few months he was able to get about out-of-doors in pleasant weather. His mother lived to the age of one hundred and two years and two months.

Miscellany.

DR. OLIVER WENDELL HOLMES ON MEDICINE.

THE *London Medical Times and Gazette* publishes Dr. O. W. Holmes' Medical Highways and By-Ways, and accompanies it with the following editorial remarks: —

Englishmen, especially English doctors, in the present day are like the Athenians of old, ever looking for some new thing; and this eagerness to learn, with the least possible delay, everything that may have in it the germ of advance, is a trait of the national character which we would not for one moment wish altered, for it is essential to progress. We, like most journalists, make it our business to meet this want so far as lies in our power, by putting before our readers, without loss of time, that which we think will interest them. This week we depart from usage by printing an address which is now several months old. Its very excellence is the excuse for our delay. Other matters have pressed upon us, for which we have been obliged to immediately find space lest, when the occasion had passed away, the fugitive words might have lost much of their interest. But when Dr. Wendell Holmes adorns a medical festival with wise, humorous, and graceful speech, it is not necessary to be minutely acquainted with the circumstances which lead him to open his lips. He makes the occasion great; the occasion does not add importance to his remarks. He is always entertaining and always instructive.

Dr. Oliver Wendell Holmes is a poet, a humorist, a philosopher, *sui generis*. Most, indeed nearly all, of those writers of his country and language who have earned, by writings akin to his, a place in the temple of fame, have looked for most of their poetic inspiration either to nature or to the past. Some have left the noisy, smoky town, with its ugliness and its vulgarity, and dreamed sweet thoughts amidst the song of birds, the rustle of trees, the purling of brooks, or the roar of the sea. Others have familiarized themselves with the silent splendor of the past, times which have left us only the grand remains of what was best in them; all the littleness, ugliness, and baseness that existed then having long since perished, and what was great and beautiful alone survived. But Dr. Holmes has struck out a path of his own. He has gilded with his fancy the prosaic existence of an American boarding-house. Although a lover of nature, and able to appreciate antiquity, yet he has never turned himself away from the actual present, from the homely ways of the poor, the vulgarity of the rich, the hard, dry materialism of science, the hopes and fears, the faults and the virtues of every-day men and women in their every-day surroundings, and everything he has touched he has lit up with poetry, wit, and wisdom.

The present address is an illustration of this. The history of medical science we all know to be a thing to be proud of: it is a history illustrating the power of the human mind in wresting her secrets from Nature, and showing individual examples of unselfish devotion to the cause of humanity such as cannot be surpassed and can seldom be paralleled. But few beside Dr. Holmes either could or would have clothed this dry though noble skeleton with such a luxuriant growth of fanciful allusion, thoughtful suggestion, and wise precept. In the history of medical science, however, we have a theme which no one will hold to be unworthy of the highest genius. But what shall we say of the natural history of quackery? — of credulous folly on the one hand, and self-delusion or willful imposture on the other? The broad highway along which Medicine has marched to greater and greater conquests over disease may indeed suggest high thoughts; but what of the by-ways along which charlatans have crept to plunder? Nevertheless, this subject is not unworthy of consideration. The public do resort to quacks, and they do so prompted by natural, and in themselves praiseworthy, instincts. And all quacks are not deliberate impostors. Even from them the wise may learn. They, like ourselves, have to do with a capricious, ignorant, timid, suspicious, and yet confiding public. If a quack is successful, there must be a reason for his success, and though we may not choose to follow his methods, yet it cannot be useless to try and find out the secret of that success. Dr. Holmes contemplates the different forms of popular medical delusion, not merely as a philosopher, but as a medical man; he can thus not only look at them, but see through them. We will not, as we might well be tempted to do, quote from his eloquent address, but will refer our readers to it, confident that they will follow him with pleasure and profit, alike through the by-ways as through the highways of medicine.

◆

"THREATENED TYPHOID."

MR. EDITOR, — I was glad to see one of your correspondents speak up for the term "threatened with typhoid," but sorry he did not "go the whole figure" and boldly assert the power of medicine to abridge if not exactly "cut short" that disease. My practice for the last dozen years has been in about the worst drained section of the whole city, one in which typhoid fever is peculiarly rife. Your readers will scarcely credit my statement when I say that though all my neighbors are perpetually busy with this disease, I, with two large medical charities on my hands, rarely see a case except in those early "threatening" stages so well described by your correspondent. The cases which I do see of real confirmed typhoid are almost wholly those when I am called in too late, that is, after the first week. I believe, on my own experience, that typhoid fever in the first week, and especially in the first few days, can in most cases be much shortened by treatment and the severe symptoms of the later stages prevented or lightened. There is nothing new about this claim. Typhoid fever is as old as man, probably, and was successfully treated by Hippocrates, Sydenham, Rush, and many more before Bretonneau or Louis were thought of. Their treatment was principally cathartics, supplemented by bleeding and emetics. In my experience, if you can produce an artificial diarrhœa by cathartics, and especially mercurials, in the early stage, you will, as a rule, shorten the disease. An emetic at the very outset, as recommended by Dr. James Jackson, I have often found very useful. The common treatment is to let the case run on till the patient is almost dead with blood-poisoning, and then stimulate. It is a most fatal practice, and accounts for the usual great mortality of typhoid. I began this way myself. The theory is that the patient is weak and has a long disease to go through, and must therefore be stimulated to keep up his strength. Hippocrates knew better than this when he said: "Bodies not properly *cleansed*, the more you nourish the more you injure." Sydenham alluded to it when he said: "The dread of malignancy in disease has killed more men than gunpowder;" because it made men afraid to use evacuating measures, the only means of eliminating the poisonous material from the system. These men may have been fools; my own personal experience may be utterly fallacious; but it will take more ridicule than has yet been brought to bear upon me (which is not a little) to convince me of either the one or the other.

Yours respectfully,
EDWARD T. WILLIAMS, M. D.

◆

SYMMETRICAL SIGNS OF BASIC CAVITY.

DR. J. MITCHELL BRUCE in a series of articles in the *Practitioner* on Basic Cavities mentions a point which we do not recollect having seen elsewhere alluded to. He says it probably occurs in connection with other excavations, as at the apex, but is best appreciated in cavities at the base. To quote his own words: —

"On listening over the healthy side of the chest at a spot corresponding symmetrically with the seat of cavity, the observer may be surprised to find that the respiratory sounds, especially the expiratory, are here also of a somewhat cavernous or at least tubular character; and he is led to diagnose consolidation or excavation of the opposite base. In one case I have even heard the same 'key-hole wailing' sound in expiration, as over the seat of excavation. I have little doubt that this sound over the opposite base is an *echo;* for I have observed it continue unchanged for months, and post mortem have found no local disease whatever to account for it. It appears to me to be more distinct (in the case of cavities at the *posterior* base) at some distance from the spine than close to it — another feature in favor of its being an echo. The cavernous sounds of the affected side are probably conducted up the bronchus, and reflected down the corresponding air-tubes of the healthy lung."

◆

FROZEN MEATS.

IN a communication to the *Sanitary Engineer* Dr. Prosper de Pietra Santa calls attention to the application of artificial refrigeration to meats for the purpose of destroying parasitic germs. Experiments have shown that a temperature of –19° C. is necessary for the complete destruction of all such germs, and it is said that meat so treated is more digestible than ordinary meat. The Academy of Sciences of Paris have been recently investigating the subject. A statement was made by M. T. Carré, the inventor of a system of refrigeration by ammonia, that one of his machines producing 300 kilogrammes of ice per hour can operate on a space of a hundred cubic meters containing 60,000 kilos. of ham, with an expenditure of 900 kilos. of coal, and from two to three kilos. of ammonia in twenty-four hours, and reduce its contents to –30° in the space of nine days. A single man is sufficient to manage the apparatus, and the total expense does not exceed 480 francs. This would make the cost of refrigeration a little less than one centime per kilo.

In his paper M. H. Bouley states that meat submitted to congelation does not undergo any modification after thawing, but remains as it was before. As the use of raw meat is very common in modern therapeutics, exposing one to the ingestion of the eggs of all sorts of parasites, by submitting meats of all kinds for one or two hours to a temperature of –40° or –50° the eggs and parasites will be certainly destroyed.

On the other hand, observation shows that frozen meats can be kept even longer than others and become more digestible. In one of the last sessions of the Institute, M. Dumas, the illustrious chemist, stated that thawed meat was as healthful and sapid as the ordinary meat from the butcher. He even thinks that freezing of meat is as good a means as cooking to remove from it the danger from parasitic organisms which can develop in the interior of the human body.

After a discussion, in which Dumas, Bouley, Frany, and others took part, the Academy agreed to the following opinion: —

First, That raw meat is easier of digestion than cooked meat.

Second, That in the therapeutic use of raw meat physicians should prescribe in preference meat which has been frozen.

◆

A CASE OF DIABETIC COMA WITH LIPÆMIA.

A CASE of diabetic coma with lipæmia is reported by Messrs. Fraser and Logan in the *Edinburgh Medical Journal* for September.

The results of the post-mortem examination are summarized as follows: —

In the blood there was found fatty matter, precipitated albumen, and a substance having an odor like that of acetone. The fat seems to have adhered largely to the sides of the blood-vessels, causing an obstruction in the flow of their contents, resulting in congestion and in extravasations of the vascular contents. The lung stasis thereby produced would account for the dyspnœa and cyanosis; and the cerebral congestion would probably cause coma, the production of which might have been aided by defective nutrition and by poisoning resulting from accumulation of effete matter and from the presence of acetone.

These may be regarded as the immediate causes of the fatal termination. The remote cause seems to have been exposure to cold, one of the results of which was an inflammatory change in the kidneys, which interfered with their eliminative function, and hence the marked diminution in the quantity of urea, and probably of glucose, excreted. The evidence appears to point to the fact that the fatty matter so largely present in the blood was universally and equally distributed throughout the body. Its origin may in that case be reasonably assigned to some constituent existing in the blood, which had somewhat rapidly undergone transformation. The blood corpuscles could not have produced it, for their number was not lessened.

The chemical relationship between glucose and fat is a very remote one, nor can albuminous matter be either rapidly or easily transformed into fat. An altogether satisfactory explanation, therefore, of the origin of the abnormal constituents present in this and in similar cases cannot be given from existing data. We can only advance hypotheses; and our contribution to these hypotheses is that from the glucose present in the blood the acetone was mainly derived, while the fatty matter originated from a transformation of the albuminous constituents of the blood-plasma.

◆

THE THORACOPLASTIC OPERATION OF ESTLANDER.

DR. FENGER, of Chicago, presents in the *Medical News* an account of this new operation as successfully performed by him upon a girl sixteen years of age. She had suffered from empyæma for two years and a half when first seen, for the last year of which she had a fistulous opening in the tract made by an aspirating needle a few months previously. There was some sinking of the chest wall on the right side, but carbolic washing and Lister dressings applied for three months failed to produce any further closure of the cavity. The fistula started two and one half inches below and half an inch to the right of the nipple, between the sixth and seventh ribs, and lad upward and backward into the empyæma cavity into which a probe could be passed five and a half to six inches. The amount of discharge was from one and one half to two table-spoonfuls daily.

Percussion resonance was clear over the clavicular and in the infraclavicular region, down to about the fourth rib, but dull from this point down to the liver. In the place of the clear percussion, vesicular respiration was somewhat weak, but still could be distinctly heard. On the dorsal side there were clear percussion and vesicular respiration all over the scapula; in the infrascapular region, dull percussion and no respiration sound.

The patient was growing weaker, had lost her appetite, and complained of frequent pain in the right side and of headache. Finally, fifteen months after the establishment of the fistula, the operation was performed to enable the chest wall to collapse enough to meet the lung, no hope existing of further expansion of that viscus. The incision was carried upward and backward from the mouth of the fistula about five inches in length. By means of a gouge the sixth rib was denuded of periosteum, and a piece seven centimetres long removed by a bone forceps. In the same manner six centimetres of the fifth rib were removed. After this had been done it was possible to introduce the little finger into the empyæma cavity, which was found to be two inches long, an inch and a half high, and about an inch deep, extending up behind the fourth rib, the apex being at the third intercostal space. The upper border of the incision could be drawn upward beyond the fourth rib, which was denuded, and a piece six centimetres in length removed. The walls of the cavity were found to be firm, hard, connective tissue, covered with a layer of flabby granulating tissue. All of the latter was removed by the sharp spoon. The hæmorrhage during the operation was trifling, no ligatures were needed, the slight hæmorrhage from two of the intercostal arteries being stopped by torsion.

The operation was done under Lister, a counter-opening being made near the angle of the scapula. The subsequent progress was good, the drainage tube was removed from the cavity in thirty-seven days, and the cavity and fistula were completely closed in fifty-four days. Seven months later the patient presented herself in good appetite and condition, with no cough. The comparative chest measurements were as follows: —

About the nipple the circumference of the left thorax was thirteen and a quarter inches; of the right ten and three quarters inches, measurements being made below the angle of the scapula. At the axilla the circumference of the left thorax was thirteen and three quarters inches; of the right, eleven and three quarters. In the region of the eleventh dorsal vertebra the circumference of the left thorax was twelve and a half inches; of the right, ten inches. The anterior surface of the sternum was turned to the right. The deepest sinking in of the right pleural cavity was at a point just above the nipple, corresponding to the fourth rib, where the antero-posterior diameter was three and a half inches; at the corresponding point on the left side, the diameter was five inches. Immediately below the clavicle, the antero-posterior diameter on the right side was three inches; on the left, three and three quarters inches.

Though the ends of the resected ribs could be felt, the firmness between them showed a regeneration of osseous tissue.

On the right anterior side there was clear percussion to the fourth rib, below this point, dull; in the axillary region clear percussion to the fifth rib, below this point, dull. On the posterior side percussion in the supraspinatous, infraspinatous, and interscapular regions, was clear; in the infrascapular region, dull.

This operation, that is, costal resection, not for caries or for room for drainage, but to permit the obliteration of a cavity by collapse of the chest wall, was first systematized by Estlander, and a report of eight cases published by him in the *Revue Mensuelle de Médicine et de Chirurgie*, Feburary, 1879.

◆

OVARIAN PRESSURE.

A PARIS correspondent of the *Chicago Medical Journal and Examiner*, speaking of the results of ovarian pressure as practiced by Charcot at the Salpêtrière, says: —

"One of the first patients presented was a young girl of charming appearance. The only visible sign of a departure from normal physiology was a persistent inward contraction of right foot. She was, however, wearing a ceinture which produced pressure in the region of the ovaries. The ceinture was removed, and immediately a violent fit of coughing was developed, which, even for the short time that it was exhibited, was positively painful to observe. The ceinture was reapplied, and the coughing ceased as by magic. Another patient was presented, with whom the removal of the ceinture was followed by the regular development of the various stages of epilepsy, exhibiting all the violence of agitation, frothing at the mouth, rapid, powerful muscular movements, followed by the most complete opisthotonus. The application of the ceinture cut short these paroxysms at any particular stage of their development with the most remarkable promptitude. Some half dozen patients were presented, illustrating in a similar way the same influence. In one case, when the removal of the ceinture was not followed immediately by an onset of the epileptic attack, the assistant gave a very slight but rapid tangential blow of the hand in the small of the back, and immediately the epileptic attack began, culminating in the cataleptic condition.

"One case was exhibited of unusual interest, on account of its history. Becoming pregnant, it was found that the points on which pressure had to be exerted in order to relieve the attacks of epilepsy, gradually ascended as the pregnancy developed."

◆

DEATH OF THE OLDEST PHYSICIAN IN PROVIDENCE, R. I. GEORGE CAPRON, M. D.

DR. GEORGE CAPRON, of this city, died September 21st, of apoplexy. He had been in active practice here for sixty years, and worked up to the very day of the onset of his fatal illness. As an obstetrician he stood preëminent. His genial nature and his great kindness toward the poor caused him to be respected and beloved by all classes. Physically he was a remarkable man, and seemingly never tired. The amount of work he performed during his three-score years of constant practice cannot be estimated. W.

PROVIDENCE, R. I., *September* 25, 1882.

ACTION OF THE PROVIDENCE MEDICAL ASSOCIATION ON THE DEATH OF DR. GEORGE CAPRON.

At a special meeting of the Association held September 23, 1882, Dr. E. M. Harris, the president, occupied the chair, and appointed Drs. Ely, Snow, and Perry a committee to draft a minute and resolutions, which were as follows: —

"Another of the original members of this Association has passed on to the silent land, one rich in years and in the respect of those within and without the profession.

"For the many years we have had the pleasure of his acquaintance we have never heard one speak ill of him. For near sixty years he has given his whole mental and physical strength to his chosen profession, *given* we might say, in every sense of the word; for, though simple and frugal in his tastes and mode of life, he left none of this world's goods; yet he worked for his patients early and late.

"As a man he was cheerful, kind, and genial, considerate of the feelings and rights of others, a gentleman in the best sense of the word.

"As a physician he was esteemed and respected by his fellows, and in his favorite branch of the profession it was unanimously conceded he stood above us all.

"Though old in years he was young in his zeal for all that was new and true in his speciality, as all who have attended our meetings and listened to his well-thought-out papers can testify.

"He was most wonderfully spared the mental and physical infirmities of old age.

"May his kindness of heart, his unselfish labor for those who trusted their lives in his hands, ever live in our memories and stimulate us to act well our part in what remains of life.

J. W. C. ELY, M. D.,
E. M. SNOW, M. D.,
T. W. PERRY, M. D.

"By vote of the Association it was then *resolved*, that the preceding 'minutes' be entered upon the records of the Association, and that a copy be sent to the family of Dr. Capron, and also to the *Boston Medical and Surgical Journal* and to the Providence newspapers for publication.

"*Resolved*, That we as an Association will attend the funeral of the deceased."

WILLIAM R. WHITE, M. D., *Secretary*.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 23, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	635	302	26.07	7.23	14.45	1.13	3.26
Philadelphia	846,984	350	137	17.97	3.71	—	3.14	8.55
Brooklyn	566,689	283	145	37.77	9.71	24.71	1.06	6.00
Chicago	503,304	250	149	33.60	7.20	14.40	6.40	4.40
Boston	362,535	186	76	28.49	5.13	19.23	3.76	5.13
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	188	80	38.20	2.13	10.64	4.16	12.24
Cincinnati	255,708	111	58	20.72	7.21	10.81	2.70	—
New Orleans	216,140	97	24	—	—	—	—	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	74	—	45.90	4.05	17.55	10.80	10.80
Buffalo	155,137	96	54	46.73	4.25	32.56	1.42	4.25
Milwaukee	115,578	69	54	39.12	5.80	28.98	—	4.35
Providence	104,857	39	15	15.36	10.24	10.24	2.56	—
New Haven	62,882	32	16	25.00	3.13	15.62	6.25	—
Charleston	49,999	26	13	19.23	3.85	7.69	—	—
Nashville	43,461	28	9	35.71	—	17.86	10.71	—
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	24	18	41.58	—	29.11	8.32	4.15
Cambridge	52,740	23	13	30.38	—	17.36	4.34	—
Fall River	49,006	28	17	39.27	3.57	28.56	7.14	5.88
Lawrence	39,178	17	6	29.41	5.88	11.76	—	—
Lynn	38,284	14	3	14.28	7.14	7.14	—	—
Springfield	33,340	14	4	42.84	—	14.28	14.28	7.14
Salem	27,598	—	—	—	—	—	—	—
New Bedford	26,875	13	7	30.76	—	30.76	—	—
Somerville	24,985	6	2	16.66	—	16.66	—	—
Holyoke	21,851	13	—	53.83	—	30.76	15.38	—
Chelsea	21,785	8	5	37.50	12.50	25.00	—	12.50
Taunton	21,213	—	—	—	—	—	—	—
Gloucester	19,329	4	2	50.00	—	25.00	25.00	—
Haverhill	18,475	10	5	40.00	—	40.00	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	7	2	14.28	—	—	14.28	—
Newburyport	13,537	5	4	40.00	—	40.00	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	3	0	—	—	—	—	—
Nineteen Massachusetts towns	138,881	58	16	17.24	1.72	15.52	1.72	—

Deaths reported 2711 (no reports from St. Louis and District of Columbia): under five years of age 1236: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 775, consumption 328, lung diseases 143, diarrhœal diseases 409, diphtheria and croup 131, typhoid fever 82, whooping-cough 46, scarlet fever 33, malarial fever 33, small-pox 17, cerebro-spinal meningitis 17, puerperal fever four, erysipelas two, measles one. From *whooping-cough*, New York 20, Buffalo six, Brooklyn, Chicago, and Pittsburg four each, Milwaukee and Charleston two each, Boston, Baltimore, and Springfield one each. From *scarlet fever*, New York nine, Cincinnati seven, Philadelphia and Brooklyn five each, Chicago and Baltimore two each, Nashville, Cambridge, and Lynn one each. From *malarial fevers*, New York 17, Brooklyn seven, Chicago four, Baltimore three, Providence two. From *small-pox*, Baltimore 15, Philadelphia and Nashville one each. From *cerebro-spinal meningitis*, Chicago four, New York three, Milwaukee and Lawrence two each, Philadelphia, Cincinnati, Pittsburg, Providence, Fall River, and Holyoke one each. From *puerperal fever*, New York, Brooklyn, Chicago, and Charleston one each. From *erysipelas*, Chicago and Cambridge one each. From *measles*, New York one.

Fifty-four cases of small-pox were reported in Baltimore, Cincinnati six, Buffalo one; typhoid fever 56, diphtheria 19, scarlet fever seven, in Boston; diphtheria four, and scarlet fever 21, in Milwaukee.

In 34 cities and towns of Massachusetts, with a population of 945,118 (population of the State 1,783,086), the total death-rate for the week was 23.64 against 22.46 and 23.46, for the previous two weeks.

For the week ending September 2d, in 169 German cities and towns, with an estimated population of 8,410,240, the death-rate was 24.1. Deaths reported 3895: under five years of age 2221; consumption 412, diarrhœal diseases 352, lung diseases 248, diphtheria and croup 130, scarlet fever 107, whooping-cough 80, typhoid fever 67, measles and rötheln 25, puerperal fever 12, small-pox (Königsberg and Breslau one each) two. The death-rates ranged from 14.2 in Erfurt to 34 in Königsberg; Breslau 32.1; Munich 24.7; Dresden 29.8; Berlin 25; Leipzig 18.7; Hamburg 21.1; Cologne 29.1; Frankfort 20.4; Strasburg 25.8.

In the English towns, with an estimated population of 8,469,571, for the week ending September 9th, the death-rate was 19.9. Deaths reported 3222: acute diseases of the respiratory organs (London) 178, diarrhœa 379, scarlet fever 81, whooping-cough 69, fever 55, measles 54, diphtheria 27, small-pox (London nine) 12. The death-rates ranged from 13.6 in Leicester to 30.2 in Sunderland; London 17.7; Bristol 18.1; Brighton 19; Derby 20; Birmingham 23.1; Liverpool 26.2; Hull 28.3. In Edinburgh 14.6; Glasgow 22.8; Dublin 27.6.

For the week ending September 9th, in the Swiss towns, population 494,390, there were 31 deaths from diarrhœal diseases, consumption 21, lung diseases 13, diphtheria and croup 11, typhoid fever four, whooping-cough two. The death-rates were, at Geneva 9.3; Zurich 18.3; Basle 15.5; Berne 21.8.

The meteorological record for the week ending September 23d in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
September, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 17	29.975	60	71	49	52	20	53	41	W	W	W	20	5	7	F	F	C	—	—
Mon., 18	29.886	72	85	55	88	49	78	72	SW	W	W	14	16	9	O	C	C	—	—
Tues., 19	29.899	77	88	66	87	52	76	72	SW	SW	SW	7	9	10	F	F	C	—	—
Wed., 20	30.044	71	87	64	87	74	93	85	SW	Calm	NE	4	0	16	F	C	R	—	—
Thurs., 21	30.296	54	60	53	94	94	100	96	NE	NE	N	18	12	6	O	O	O	—	—
Fri., 22	30.175	60	72	52	100	100	100	100	NE	NE	SE	8	7	7	G	O	R	—	—
Sat., 23	30.084	69	77	62	100	86	100	95	S	SW	SE	9	12	5	R	O	O	—	—
Means, the week.	30.051	66	88	49				80										36.30	5.28

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 22, 1882, TO SEPTEMBER 29, 1882.

Middleton, P., assistant surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, with permission to go beyond limits of the Department. S. O. 103, Department of Texas, September 20, 1882.

Carter, W. F., assistant surgeon. Relieved from duty at Fort Concho, Texas, to report to commanding officer, Fort Stockton, Texas, for temporary duty as post surgeon. S. O. 103, Department of Texas, September 20, 1882.

Powell, J. L., assistant surgeon. To report at headquarters, Department of Texas, to temporarily relieve Assistant Surgeon P. Middleton as post surgeon and attending surgeon at department headquarters. S. O. 103, Department of Texas, September 20, 1882.

Hopkins, . E., assistant surgeon. Relieved from further duty at Camp Washington, Gaithersburg, Md., and will proceed to Fort Adams, R. I., and resume his duties at that post. S. O. 168, Department of the East, September 22, 1882.

Horton, S. M., major and surgeon. Granted one month's leave on surgeon's certificate of disability. S. O. 96, Department of the Platte, September 11, 1882.

Smith, Andrew K., major and surgeon. Leave of absence on surgeon's certificate of disability granted in special orders No. 131, August 22, 1882, Department of Arizona, extended two months on surgeon's certificate of disability. S. O. 214, A. G. O., September 4, 1882.

Spencer, William G., captain and assistant surgeon. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 219, A. G. O., September 20, 1882.

Shufeldt, Robert W., captain and assistant surgeon. Now awaiting orders, to report by letter to the commanding general, Department of the South, for assignment to duty. S. O. 209, A. G. O., September 8, 1882.

Corson, Joseph K., captain and assistant surgeon. Granted two months' leave of absence. S. O. 210, A. G. O., September 9, 1882.

Comegys, E. T., captain and assistant surgeon. Assigned to duty at Fort Supply, Indian Territory. S. O. 174, Department of the Missouri, August 30, 1882.

Bushnell, G. E., first lieutenant assistant surgeon. Granted leave of absence for one month. S. O. 147, Department of Dakota, September 7, 1882.

Wakeman, William J., assistant surgeon. Assigned to duty at Fort Douglas, Utah. S. O. 91, Department of the Platte, September 1, 1882.

Maddox, T. J. C., assistant surgeon. To proceed from Fort Clark, Texas, *via* San Antonio and Laredo, to Fort Brown, Texas, for duty. S. O 96, Department of Texas, September 8, 1882.

Taylor, Morse K., assistant surgeon, relieved from duty as attending surgeon at Detroit, Mich. S. O. 157, Department of the East, September 9, 1882.

Books and Pamphlets Received. — On Asthma: Its Pathology and Treatment. By Henry Hyde Salter, M. D., F. R. S., Fellow of the Royal College of Physicians, etc., etc. First American from the last English Edition. New York: William Wood & Co. 1882.

Fat Embolism. By Robert Saundry, M. D., Edinburgh, and Gilbert Barling, M. B., London, F. R. C. S. (Reprint.)

Medical College of Virginia, Richmond. Announcement of the Session of 1882–1883, and Catalogue of Graduates.

Medical Register and Directory of the Practitioners of Medicine in the City and County of Philadelphia. Compiled by Samuel B. Hoppin, M. D. 1882.

Letters and Facts not heretofore published touching the Mental Condition of Charles J. Guiteau since 1865. Submitted to the President of the United States by John W. Guiteau.

Report on Ophthalmology, made to the Medical and Chirurgical Faculty of Maryland at the Eighty-Fourth Session, April, 1882, by Julian J. Chisolm, M. D. (Reprint.)

Rupture of the Eyeball in its Posterior Hemisphere from a Blow in the Face. By Julian J. Chisolm, M. D., Baltimore. (Reprint.)

A Treatise on the Science and Practice of Medicine, or the Pathology and Therapeutics of Internal Diseases. By Alonzo B. Palmer, M. D., LL. D., Professor of Pathology and Practice of Medicine, and of Clinical Medicine, in the University of Michigan, etc. Vol. II. New York: G. P. Putnam's Sons. 1882.

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery, by Authors of various Nations. Edited by John Ashhurst, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania. In Six Volumes. Vol. II. New York: William Wood & Co. 1882.

A Case of Abscess of the Left Frontal Lobe of the Cerebrum, with Special Reference to Localization. By E. C. Seguin, M. D. (Reprint.)

Transactions of the State Medical Society of Arkansas at its Seventh Annual Session. 1882.

The Malignity of Syphilis, with an Analysis of Four Hundred and Fifty Cases. By L. Duncan Bulkley, M. D. (Reprint.)

A Second Year's Experience with Non-Restraint in the Treatment of the Insane. By J. C. Shaw, M. D. (Reprint.)

Woman's Medical College of the New York Infirmary. Fourteenth Annual Catalogue. 1882.

Some of the Simple Methods of Performing Hystero-trachelorrhaphy. By O. E. Herrick, M. D. (Reprint.)

Specialties in Medicine. By Rufus Baker, M. D. Connecticut.

Life of John M. Briggs, of Bowling Green, Ky. By W. K. Bowling, M. D. (Reprint.)

The Antiseptic Treatment of Wounds after Operations and Injuries. By W. T. Briggs, M. D. (Reprint.)

Transactions of the South Carolina Medical Association, Thirty-Second Annual Session. 1882.

Thomes's Operation: Laparo-Elytrotomy. By F. E. Beckwith, M. D. New Haven. (Reprint.)

Transactions of the American Otological Society. Fifteenth Annual Meeting. Vol. III. Part 1. Boston: A. Williams & Co.

Neue Untersuchungen über den Respirations-gasanstausch im fieberhaften Zustande des Menshen. Von Prof. Dr. Gustav Wertheim. Wien. 1882. (Reprint.)

Original Articles.

ON THE HABITUAL USE OF POISONS.[1]

BY A. H. JOHNSON, M. D., SALEM.

IN consenting to present a paper to this Society on the Habitual Use of Poisons, I had little thought of the difficulties in the way of obtaining facts from which to derive any valuable conclusions. Otherwise I should have declined to attempt what must inevitably prove a work of little value.

The learned works of Taylor, Woodman and Tidy, Reese, and many other toxicologists, give brief space to the discussion of our subject, not because of its relative unimportance, but manifestly because of a lack of such knowledge as would justify them in more positive statements. The nature and magnitude of the questions involved give it an appalling intricateness and extent. These questions will probably never admit of more than an approximate solution, and such a solution is to be reached through years of laborious research and experiment. With no practical knowledge of toxicology or chemistry, beyond what is common to nearly every regularly educated general practitioner, it is not to be expected that I can contribute anything to elucidate a subject which such experts find themselves compelled to treat meagrely. Therefore in what follows you will find rather a statement of a subject for investigation than its discussion. Whatever of good may come from such a paper as the present must result indirectly from its exhibition of such ignorance that the feeling of dissatisfaction it creates may awaken a profitable spirit of inquiry.

The numerous definitions of the term poison illustrate Dr. Taylor's statement that "in legal medicine it is difficult to give such a definition of a poison as shall be entirely free from objection." In popular parlance a poison is a substance which, when taken into the human system *in small quantities*, will impair health or destroy life. But many poisons, like nitre or oxalic acid, prove fatal only when taken in doses of from one half an ounce to an ounce. All writers on toxicology that I have consulted, apparently agreeing with the statement of Woodman and Tidy, that "half an ounce can hardly be called a small quantity," avoid the exclusiveness of the popular idea by using in their definitions terms so general that they cease to define.

Webster declares a poison to be "any agent capable of producing a morbid, noxious, or dangerous effect upon anything endowed with life." Dr. George M. Beard, in his work on stimulants and narcotics, adopts this definition as his own, saying that "the qualification 'in comparatively small quantities' or 'in quantities not very bulky,' might be added, but it is not essential to the definition." According to this the term poison is made to include heat and cold, and the most harmless articles of food. For the most simple food, if used to excess, may *prove* "*capable* of producing a morbid, noxious, or even dangerous effect upon" the body. Thus Dr. Taylor tells us of a young woman who died in consequence of a peritonitis brought on by over-distention of the stomach, produced by eating a quantity of raw rice mixed with milk, yet neither rice nor milk nor the two combined are poisons. Reese, in his work on Toxicology, defines a poison to be "a substance capable of producing noxious and even fatal effects upon the system, no matter by what avenue it be introduced, and this as an ordinary result in a healthy state of the body, and not by mechanical action." Chloride of sodium has proved a fatal poison in doses of from one half a pound to a pound, yet this is not an ordinary result of the use of common salt. It is one of the constituents of the body, and health cannot be long maintained when it is excluded from the daily food. The same objection also applies to this definition as to the one already quoted, namely, that some of the simplest articles of food are, when used to excess, "capable of producing noxious and even fatal results." Dr. Taylor gives the following comprehensive definition: "A poison is a substance which, when absorbed into the blood, is capable of seriously affecting the health or of destroying life." This also includes so much as to lack definiteness, for excessive use of food may seriously affect the health. Dr. Lethely's definition, adopted by Drs. Woodman and Tidy, is as follows: "A poison is anything which otherwise than by the agency of heat or electricity is capable of destroying life, either by chemical action on the tissues of the living body or by physiological action from absorption into the living system." This, the least objectionable of the definitions with which we are acquainted, is still too inclusive for the reason already frequently repeated.

There is a truth in the popular idea of the meaning of the word poison which a correct definition of the word will preserve. The truth, namely, that evil resulting from the physiological action of some substances is so frequently seen that it is their most conspicuous attribute. The idea of possible impairment of health or of death resulting from their use should always attend their administration, and lead one to carefully restrict the quantity and frequency of the doses employed, and to seek their earliest possible discontinuance. Their use for physiological purposes is warranted only in conditions where their power to exalt or depress special functions may be used to regulate functions already disturbed by morbid action.

I submit the following definition, which sufficiently limits, at the same time that it explains, the application of this word poison: A poison is a substance which, when in any way absorbed into the human system, has so dangerous a power to pervert or arrest the bodily functions that to avoid these evils its entrance into the system must be carefully restricted. This definition, while sufficiently elastic to include all substances properly treated in a work on toxicology, also excludes the innocuous articles of food which can become injurious only when used to gluttonous excess. It also keeps prominent the baneful action of certain substances which secures for them the name "poisons." It is this well-known characteristic which leads us to notice with astonishment and curiosity that some persons habitually use them.

By habitual use we mean a use which is continued at frequent intervals, through many months or years, in obedience to a constitutional or acquired craving, originally begotten by the action of the substance taken.

Conspicuous among the drugs thus used are opium and its derivatives, alcohol, absinthe, tobacco, chloral, and arsenic. It will be with special regard to the action of these articles that the statements of this paper will be made. It certainly would be a waste of time to take space to prove that each one of the above-named drugs has been and is habitually used. Concerning the first four of them the fact is too patent and familiar, and abundantly attested by many medical writers. Concerning the remaining two, we have for one, namely, chloral, the recent thorough investigation of Dr. Kane, published in his book entitled Drugs that Enslave, and for the other the statements of Drs. Vogt and Von Tschudi, substantiated by Mr. Heisch and Dr. Von Vest, and confirmed beyond a peradventure by the investigations and statements of Dr. Roscoe, Dr. Knappe, of Styria, and Drs. Rutter and Maclagan, of London, in 1864. So that Dr. Taylor, who, in an earlier edition of his work on Medical Jurisprudence, styled the accounts concerning arsenic eating as absurd and exaggerated, in his last edition admits that they are founded on respectable authority. The testimony with reference to the existence of the arsenic habit is succinctly stated by Dr Stillé in his work on Materia Medica.

---

[1] Read before the Massachusetts Medico-Legal Society, February 1, 1882.

Nor would it be in place here to enter upon a statistical investigation to show the extent to which these habits prevail. For in the first place such statistics have been already presented by recent writers, conspicuous among whom are Drs. Calkins and Kane, and in the second place it cannot be claimed for such statistics that they present the facts with more than a very rude approximation to accuracy, owing to the secrecy with which these habits are indulged, the untruthfulness of the parties addicted to them, and the reluctance of dealers to acknowledge the extent of their illicit traffic in these drugs; and third, because the practical result of such an investigation for this Society would simply be to prove, what needs no additional proof, namely, that many powerful narcotics and stimulants are by many persons habitually used. Moreover, the work of gathering such statistics belongs rather to the sanitarian, the philanthropist, and political economist, who seek to adapt corrective measures to the magnitude of the evils they seek to reform.

We propose simply to comment upon some of the questions to which the well established fact gives rise.

First, concerning questions relating to the physiological action of poisons. It is evident that this question cannot in all cases be answered by our present knowledge of chemical action. One of the most inexplicable marvels among physical and vital phenomena is the contrary effects which are produced by changes in the adjustments of the molecular constituents of elements. Carbon, hydrogen, oxygen, and nitrogen are each essential components of healthy living tissue, yet a minute quantity of hydrocyanic acid, composed of the apparently harmless elements, carbon, hydrogen, and nitrogen, proves a poison so instantly deadly as to allow no analysis of the method by which it arrests life. Atropine, morphine, strychnia, nicotine, nitroglycerine, alcohol, chloroform, etc., prove fatal in small quantities, although composed of carbon, hydrogen, nitrogen, and oxygen, elements which we must breathe, and eat, and drink in gross measure each day of our lives. Hence the fitness of any substance which is habitually used, to be esteemed valuable as an article of food, is not to be determined by the fact that chemical analysis shows that it is composed of the very elements which the body requires. Only the most careful and prolonged observation of the effects produced upon human tissues and functions by the use of a given substance can warrant us in declaring for or against its harmlessness, its usefulness, or its baneful character.

Nor can the fact that there is a general craving for certain articles correctly indicate that they are, aside from a medicinal use, promotive of health and longevity. One might think that it was superfluous to make this statement, yet we find writers appealing to this fact to prove that the widely extended use of certain narcotics and stimulants indicates that they meet a want which is instinctive, and hence whatever is used in obedience to an instinct is not only safely but needfully appropriated.

Anstie in his work on Stimulants and Narcotics says, "It is idle to urge that the subject of a carefully prepared experiment can be made to live in apparent health without the use of any of the substances vulgarly called narcotics, if the practical fact be that *nations cannot* and never have been able to do without them." If by this we are simply to understand that national laws have not availed to abolish the use of narcotics, we can receive it without objection, but at the same time fail to see that this fact indicates that nations *need* to use narcotics to maintain their physical or moral health. If on the other hand it is asserted that nations are, and always have been, unable to keep their people up to their largest measure of vigor without the habitual use of narcotics, the assertion is open to quite as much evidence against as in favor of its truthfulness. Nor is it quite in keeping with the experience of a multitude of intelligent observers, that those who use none of the so-called narcotics, are simply made to live in apparent health. For often the fresh vigor and endurance of one who strictly avoids all narcotics and stimulants contrasts most favorably with the physical powers of those who use them.

Among some statistics, Anstie quotes from Von Bibra the statement that all the known nations of the world are addicted to the use of tobacco. But it is scarcely three centuries since Sir Walter Raleigh and others at the court of England, by using the tobacco brought from Virginia by Sir Francis Drake, fairly introduced to Europe the custom of tobacco-smoking. Since then these nations cannot do without it, but none would think of claiming that tobacco has given modern nations any intellectual or physical superiority over the ancients. What one writer says of tobacco is probably true of all other narcotics, aside from their medicinal use, namely, "Moderation is always safe, and total abstinence can do no harm."

Moreover, there is a great error in concluding that an instinctive desire will always express itself in healthful customs. The pleasure associated with the gratification of the appetites, while it secures the use of the means for preserving and procreating life, is always a temptation to over-indulgence. Reason and virtuous resolve restrain many from an injurious stimulation of their nerves. But the tendency and practice of by far the larger number of men is to gratify their appetites with more regard to present pleasure than to possible results. Especially is this true if the evil of any practice has only an insidious and protracted approach, and in persons with exceptionally vigorous constitutions is unapparent.

Among some of the natives of tropical regions, there is a widely prevalent custom of eating certain varieties of earth or clay. Of the Otomoes on the Orinoco Humboldt says, "They undoubtedly consume large quantities of clay, without injuring their health." We have similar accounts of tribes in Western Africa, in Eastern Asia, and in northern parts of Sweden and Finland. This practice, once formed, we are told, is tyrannical, so that in many cases no punishment is sufficient to restrain those addicted to it. It is referred to by Ribot as presenting a curious instance of morbid heredity. The children of these earth eaters, according to A. von Humboldt, have often to be locked up to prevent them from running out after recent rain and eating clay. "He saw an Indian child at the mission of San Barjoe, who would eat hardly anything but earth; the child in consequence looked like a skeleton." This custom illustrates, first, the fact that the instinct to gratify natural hunger may misdirect to the use of materials which chemical analysis shows have no properties essential to nutrition. And, farther, that inherited instinct may involve a passionate fondness for substances the eating of which begets emaciation and weakness. In the same way, the widely prevalent use of narcotics simply shows their fascinating effect upon the nervous system and the great power of the artificial appetites they create, qualities which would insure their extensive use, even were the evil effects much more conspicuous, prompt, and certain.

As already remarked, the useful or baneful effects of certain substances when absorbed into the system must be determined not merely by the fact of their chemical constitution, nor from the existence among many nations of cravings for the effects they produce, but from a study of their action upon the bodily functions and tissues.

The results of such a study of the poisons we have enumerated have been presented by many competent scholars and observers, and are accessible to each member of this Society in the many modern works on materia medica and toxicology. With the statements of these writers we assume your familiarity. We do not propose to recapitulate them in detail. By them we are made acquainted with two conspicuous facts. One that they all have power, and most of them in very small quantities, to pervert or even arrest the bodily functions. The other, that most of them have been and are, by some persons, habitually taken for years in doses ordinarily fatal to one unaccustomed to use them.

Are we therefore to conclude that these articles have two methods of action? or is the difference in these instances simply due to greater or less degree of action, and to greater or less constitutional power of resistance? To determine this point we must have regard to the facts by which we determine the action of posions. These facts are of two characters; first, those which reveal a modification or disturbance of function; second, those which reveal actual changes in tissues. We find with reference to most of the poisons habitually used, that their special effects upon the tissues, in cases of acute poisoning, elude the eye even when aided by the microscope; and that in chronic poisoning from the same drugs, the post-mortem appearances are those due to a general perversion of nutrition. Even alcohol may destroy life, and leave no organic traces of the method by which it proved fatal, although in chronic alcoholism many structural changes due to its action are found. Even arsenic when fatal by no means always produces destructive changes of tissue to indicate how it destroyed life.

From these facts it is quite evident that as chemistry cannot instruct us as to the safety or danger of taking any substance, without regard to its previous trial upon the living subject, so neither can the microscope tell us what the action of a poison has been without reference to the symptoms it has evoked. But inasmuch as in the grosser action of some poisons like alcohol and arsenic we find organic changes which underlie the symptoms exhibited, and in the action of opium and tobacco detect first, derangement of function, and later, wasting of muscular tissue, which express the direct and indirect action of these drugs; I think we are right in inferring that poisons, in whatever quantities used, powerfully pervert the normal cell life of the body.

In these days we all conceive of functional activity as due to vital changes in cells, to whose activity the different organs, tissues, and fluids of the body owe their special character. So that there is no change of thought, sensation, or motion, or of nutrition, or general condition, which the physiologist does not recognize as an expression of the vital changes in the myriads of cells of which the body is composed. Yet we cannot demonstrate to the eye the differences in the functional properties of cells. These we must learn from the special work of the organ to which they belong. This is peculiarly true with reference to the various nerve centres, whose intricacy and delicateness of structure and function not only remove them from exhaustive examination, but even if every cell of every nerve ganglion could be inspected, its normal or its pathological condition might prove as invisible as the magnetic or non-magnetic condition of the molecules of a granule of iron. So although we cannot demonstrate the physical changes produced by a poison in the cell life, which is essential to the performance of any function, we feel no less confident that these changes are present, and that they may often more seriously compromise healthy nutrition and function than some grosser forms of organic disease.

With these facts before us we regard the action of poisons as of the same nature under all circumstances; namely, as due to the molecular changes produced in the fluids and solids of the body, and in the cells which compose them. When these molecular changes reach a sufficiently high degree, they may reveal their existence by structural changes discoverable by the miscroscope or plain to the unaided eye. But long before this may occur life may cease to be possible.

The extent to which such agents do harm cannot be in every case demonstrated. But that they have in all cases the same power, through strictly physical action, to pervert or modify function, must be borne in mind.

Inasmuch as we must in most instances learn their action from the symptoms they evoke, rather than from visible structural changes, we should study the tendency of their effects upon those sensitive yet healthy constitutions which best reveal them, — as the electrician makes use of the galvanometer to detect the existence and character of the galvanic current. This class, comprising as it does nearly all the female sex, and nearly all who have not passed the period of adolescence, and a very large proportion, if not the majority, of the mature males, forming as it must so large a majority of the human family, should really be the standard by which we pronounce upon the safe and beneficial employment of narcotics and stimulants. When tested upon such constitutions we learn their alarming power to limit and derange healthy bodily life.

That in certain peculiarly robust constitutions, the evil of their working may be masked by an appearance of great health and energy is by no means conclusive evidence that the narcotic or stimulant used has done no harm. The word often used concerning such cases expresses the truth. We say such an one tolerates a large quantity of his favorite narcotic. That is, the system sustains a burden imposed, and is not being supplied with that which best supports its energies. From the existence of physical evil, produced from the known action of a poison in thousands of persons who would be otherwise healthy, we rightly infer the power of the same agents to produce evil effects in all. The statement of Dr. Beehm well expresses the truth; namely, "the tolerance of a poison indicates a permanent change in the activity of organs which at first resented its administration."

We all know that it is possible for extensive impairment of important structures to occur without such failure of psychical or motor powers as to destroy clear thought or vigorous action. The degree to which such impairment of powers can be tolerated by any constitution depends upon its measure of reserve force. Compensations for injuries sustained, and readjustments of the relative activity of different organs, can occur very often in some persons, not only without arrest of life, but without great curtailment of its useful activity. But on the other hand, troubles long concealed may at last express themselves, as it were, explosively, when the limit of comfortable endurance is passed. This is illustrated by a remark of Mr. Travers when giving testimony as a witness, and quoted by Dr. Taylor, — to the effect that a man may have pursued an intemperate course for some time, and yet his appearance indicate the plenitude of health, even when he is liable to an immediate attack of delirium tremens. This fact is also illustrated by the period of incubation of specific diseases, during which we have no knowledge of the injurious working of the poison, which nevertheless goes on until its intensity is such as to give rise to disturbing symptoms. Even after apparent health is restored, the existence of an irreparable injury to his constitution may confront one in perversions of development in his children. In like manner the fact that the stimulant narcotics have done their evil work in any person's system may become first apparent in some disturbance of the nervous system in children's children, so that the remark is frequently quoted, "Gout is a disease which the fathers have all the fun of acquiring, and the children all the misery of suffering." And Ribot, after remarking that the passion known as dipsomania, or alcoholism, is so frequently transmitted that all are agreed in considering its heredity as the rule, quotes the instance of a man belonging to the educated classes, and charged with important functions, who succeeded in concealing his alcoholic habits from the eyes of the public, while his family were the only sufferers by it.

The medico-legal importance of a correct knowledge of the action of poisons which are habitually used appears in their effects upon longevity.

Whether aside from a medicinal purpose they can be wisely used, and if so, to what degree, before the boundary of temperate use is passed, and health and length of life are imperiled, are questions to which men of different customs and opportunities for observation return different answers. But it is a very significant fact that sound life insurance companies require an answer from applicants to some form of the question, "Are you now and have you always been of temperate habits of life?" A question which is understood to have special reference to the use of stimulants and narcotics.

If the medical expert is required to testify as to what constitutes a temperate use of these articles by a healthy person, he finds himself unable to give any precise reply. The degree of toleration of these powerful agents must be determined by the result of individual experiment and not by any precise rule.

The popular definition of intemperance exhibits the most ludicrous variations. To many it is simply a question of the quantities in which, and the frequency with which, a stimulant is consumed; to others, a question of ability to take large amounts of stimulants without apparently losing control of their faculties. Illustrations of absurd testimony as to the meaning of intemperance may be found in Dr. Taylor's work on Medical Jurisprudence.

But the expert very well knows that such is the power of these agents that to a very large proportion of human beings the smallest indulgence in their use, except as a medicine, is injurious, and therefore intemperate; and that what to a very large class of men appears to be moderate indulgence, is too great to remain without effect in seriously perverting nutrition.

The popular judgment seldom considers a man intemperate until he begins to show the evil results of the habitual use of some poison by his slavery to his appetite, and neglect of business duties or social proprieties. But this popular judgment is far too tardy. The injury to the nervous system, of which such injurious practices are the expression, is being slowly wrought for years before the popular verdict is pronounced.

Estimates of the effect of stimulants and narcotics upon longevity are generally based upon their excessive use. But this excess is a result of their peculiar power and special action. The symptom of excess is so frequent a product of their moderate use that it should itself affect our judgment as to the perils which any degree of moderate use may bring to health and length of life.

It is customary with some writers when discussing the effects of poisons that are habitually used, to adduce many instances in which, notwithstanding a liberal use of narcotics and stimulants, life with a large measure of vigor has been protracted to great age. But the weight of such evidence is impaired from the fact that we are not made acquainted with the family history of such persons. As Ribot tells us: "It is now generally understood that longevity depends far less on race, climate, profession, mode of life, or food than on hereditary transmission. We find centenarians among those who have led the hardest lives, as well as among those who have taken the greatest care of their health. A collier, in Scotland, prolonged his hard and dreary existence over one hundred and thirty-three years, and worked in the mines after he was eighty." Inherited longevity will assert itself above many influences generally fatal to a high average duration of life.

By application of this law of nature the number of those whose health and life have not been limited by the habitual use of poisons would probably be so reduced that the remaining number would have but small significance against the multitudes of sensitive constitutions which have been and are sure to be shattered by such habits.

Our conclusions, therefore, respecting the effects of the habitual use of poisons on longevity are more likely to be correct when based upon the known power of these agents to pervert nutrition, than when based upon appearances of undiminished health in some users of them. Whatever may be our doubts about the injurious effects of small quantities of narcotics and stimulants upon the system, we should have little hesitation in declaring that when they are long used, and in large doses, they must, in the vast majority of cases, impair health and shorten life, so that the life of any person addicted to such habits is exposed to such additional risk that it cannot be safely insured without great increase of the normal rates. And should an applicant for insurance, when required to state his habits with reference to stimulants and narcotics, conceal the fact that he is an habitual user of them, his executor may justly find, as several have *actually* found, payment of a policy so obtained, refused.

Medico-legal questions of grave importance are likely at any time to arise from the effects which the habitual use of poisons may have upon mental disposition and capacity, with special reference to management of trust property, legal responsibility, and testamentary capacity. Some of these questions were so recently clearly treated by an associate member of this Society that I limit myself to one phase of this prolific theme, namely, to the power of the habitual use of a poison like opium, or absinthe, or alcohol, to imperil public and private interests, long before either mental capacity or moral responsibility, according to the ordinary use of these terms, is extinguished. The psychical effects of these drugs exhibit protean forms. But underlying these expressions is the fact that by their physiological action they may control mental disposition and character more effectually than the weightiest moral precepts or social interests. While we cannot hold that all mental life is the product of physiological action, we are called daily to recognize the fact that physical agents, when taken into the system, suppress, or exaggerate, or distort the normal mental faculties. It is evident that they must do this by entering the circulation, and by quickening or retarding physical or nutritive changes in the nerve cells of the brain to which the blood is distributed.

It is a familiar fact that the automatic actions of the different cerebral centres, thus awakened or depressed, may, to a greater or less degree, exceed the power of the will to reasonably coördinate them. No previous perfection of mental poise, or reliability, or moral self-control, can give assurance that the *automatic* action of the brain under the influence of drugs will conform itself to the habits in which it has been trained. This action is mechanical, irresistible, often tumultuous. The centres of thought may be stimulated, or unevenly excited, or depressed, and this not in obedience to a volition based upon judgment, but by reason of a physical agent which may keep in dominant activity suggestions and inclinations ordinarily repressed. The result is to pervert mental and moral character by a twofold action; one direct, the other indirect. *Directly*, by the immediate influence of the poison on cerebral action, and the morbid craving for a repetition of its use which it creates; indirectly by the violence to the moral sense, which consciously or unconsciously occurs when once the controlling power of an appetite becomes apparent to its victim, and he realizes that he has educated a constitutional craving into strength, by which it actually cajoles and dominates his will. When one perceives that the inclinations and deeds called forth by the effects of drugs are departures from the ideals of living which his conscience approves, yet still in obedience to habit incites their repetition, each successive fall brings the conviction of moral cowardice, and remorse, and loss of effort to maintain former standards of prudence or morality. Transformations of character thus produced may proceed until a man's disposition and conduct have undergone a complete reversal before either mental capacity or moral responsibility are extinguished. Especially does this change appear in his disregard of the wise public sentiment which condemns the surrender of his powers to the habit by which he is controlled, and in his indifference to, and sacrifice of, the domestic comfort and social interests of his family.

Suppose the case of one, who, by reason of an established character for business ability and probity, has been selected by a testator to manage, as trustee, a large property. Should this trustee subsequently, by the habitual use of some stimulant or narcotic, change from a watchful, prompt, enterprising business man, of equable character, into a slack, indifferent, negligent, moody, unreliable person, it is manifest that he is no longer the man selected for the trust he holds, although his capacity to transact business may be simply dormant or perverted, unexercised, not destroyed. The removal of such a trustee for a substitute whose characteristics should be like those of his predecessor when first appointed, may be properly prayed for, and the prayer sustained by the most positive medical testimony concerning the power of drugs, when habitually used, to *pervert* the use of the mental faculties, which is often worse than their abolition. Even when the perversions of character are transient, as happens more or less frequently during indulgence in the alcohol or opium habit, the perils from the acts of one under the influence of his favorite poison should insure his displacement from positions of trust.

The effects of the habitual use of poisons or a poison on testamentary capacity may frequently prove a subject for examination by the courts, and is likely to meet an unjust decision unless a more liberal construction of the term "capacity" be allowed than at present prevails.

We are told that a person is considered to be of a sane and disposing mind who knows the nature of the act which he is performing, and is fully aware of its consequences.[1] And again, as in a case decided by Sir H. Jenner, "a person has testamentary capacity who has conducted his affairs with great shrewdness and ability, who does not labor under imbecility, and who has been treated during life as a person of indisputable capacity by those with whom he had to deal."[2] In cases of habitual intoxication, testamentary capacity has been allowed provided the mind has not been sufficiently enfeebled to render the man incapable of exercising his judgment.[3]

A similar decision was given quite recently in a suit against the estate of John Hooper, of Marblehead, by Judge Choate, of the probate court of Essex County.

That gross injustice may occur from decisions based on these grounds is apparent from the fact that great estrangement of affection and perversions of natural character may take place without imbecility or limitation of shrewdness. This may be shown to have resulted in some instances as the direct consequence of the alcohol or opium habit. It may be shown that slavery to some stimulant or narcotic has turned a devoted husband and exemplary father from a lovely wife and children to live with harlots. It may be shown also that the kind efforts of wife and children, continued with much long suffering and patience, to turn him from his habits, have only served to intensify feelings of hostility toward those who have the strongest natural claim to his love and help. If, then, as the result of such an estrangement from his family, he should will his property to comparative strangers and companions in vice, why should not the court decide that a mind not enfeebled but controlled by the perverting influence of a drug cannot hold the legal right to alienate the property interests of legal heirs without just cause. If a will may be set aside on the plea of undue mental influence, why not also, when the undue influence comes from a physical agent like opium or alcohol. If also during life it is lawful to protect the property of an inebriate's family, by putting him under guardianship, why shall not the law exercise the same judgment concerning the justice of his acts when, owing to the action of poison in his blood, he makes an unnatural will, although no mental imbecility, in the technical sense, can be proved.

---

[1] Taylor, page 824.
[2] Ibid., page 827.
[3] Taylor, page 829.

In addition to the medico-legal questions which arise from the direct effects of some poisons, when habitually used, grave legal complications arise as an indirect result of such habits. First, the acquired toleration of a poison, like opium, or chloral, or arsenic, in doses greatly exceeding those ordinarily fatal, might cause the system to successfully resist a dose given with murderous intent. In such a case if it be shown that the preservation of the victim was due to an acquired habit, and that the drug administered would in the great majority of instances produce fatal sickness, the immunity of the person poisoned would not palliate the felony of the poisoner.

On the other hand, concealment of the opium or chloral habit may lead to the innocent administration of a fatal dose by some friend or physician who is unaware of the quantities already taken.

Questions of malpractice might easily arise from the peculiar susceptibility which the habitual use of one poison may beget to another. Thus one addicted to the chloral habit may become specially sensitive to the effects of alcohol or opiates, while the power of chloral and morphine to intensify each other's action may cause an otherwise innocuous dose of chloral to arrest life.

The degree to which one poison may limit the action of another may assume a very critical importance in cases where a poison has been habitually used. Thus, while the extreme limit of time before the special effects from a poisonous dose of arsenic should appear is sixteen hours, Dr. Taylor quotes a case reported by Mr. Clegg in the *Medical Times* for October, 1848, of a girl who showed no symptoms of violent irritation from arsenic until twenty-three hours after the dose was taken.

Those who are habitual users of some poisons are more liable than others to sudden death. This may be due to the so-called accumulative action of poisons, or to the exhaustion of the power of functional compensations, or to the acquirement of susceptibility to a poison, or to the advanced destruction of tissue due to the habitual use of a poison which has been apparently well tolerated, or to a rash increase of the dose beyond the system's power of resistance.

In many such cases a suspicion of suicide or murder is likely to arise. The fact that the deceased was in the habit of freely using a poison in doses ordinarily fatal, may either divert suspicion from an actual murderer or unjustly fasten a suspicion of crime on an innocent person. If the habits of the deceased are known, the possession, use, and fatal effects are reasonably accounted for without necessarily criminating others who may nevertheless be guilty. On the other hand, if the deceased has concealed his habit, the presence of poison in his tissues after death, as when arsenic has been taken, and in the possession of one associated with him during his last illness, may lead to the arrest of an innocent person for murder. The general principles controlling such cases have received discriminating comment from Dr. Taylor, but each case will produce its interesting complications to be unraveled in the light of its special circumstances.

Our treatment of our theme thus far includes the following items: —

(1.) A definition of poisons designed to make the danger from their use conspicuous.

(2.) Recognition of the fact that they are largely habitually used.

(3.) That their fitness for such use cannot be determined by chemical analysis.

(4.) That a widely prevalent craving for them cannot indicate that they have value as food.

To which we might have added that did they contain the constituents for nutrition, the quantities in which they are taken would give them trifling value in comparison with ordinary food.

(5.) That as the physiological action of poisons cannot be determined by chemistry, so neither can it in all cases be determined by the microscope, but that

(6.) Reasoning from the gross changes of tissue they often produce, and from physical analogies, we rightly infer their power to pervert or control the cell life of the body.

(7.) That their real effects and power must be determined by the symptoms their physiological action evokes.

(8.) That our generalization from such symptoms should be made from their effects upon the more sensitive constitutions, which form the vast majority of the human family.

(9.) That tested thus, they reveal such evil power that we conclude they must have a similar influence upon all, and that in more robust constitutions the evil they work is masked by compensations made possible by a higher degree of vigorous life.

(10.) The medico-legal importance of our topic is noticed (*a*) in comments upon the method of examining the effects of an habitual use of poisons upon longevity, with special reference to life insurance; (*b*) in comments upon the effects of an habitual use of a poison upon mental disposition and capacity, with special reference to management of trusts and testamentary capacity.

(11.) As the indirect result of the habitual use of poisons we noticed: —

(*a*.) That acquired toleration of a poison in doses ordinarily fatal may cause the system to successfully resist a dose given with murderous intent.

(*b.*) That the concealment of a habit of using a poison may lead to the innocent administration of a fatal dose.

(*c.*) That the degree to which one poison may limit the action of another may have great importance in determining whether or not a poison has been feloniously used.

(*d.*) That in the case of the sudden death of an habitual consumer of poison, the habit, if known, may conceal an actual murder by poison, or, if unknown, may give rise to unjust suspicion.

With this fragmentary and very general treatment of our topic, which has exceeded the limits custom assigns to papers for these meetings of your Society, I leave it to receive more instructive elucidation at the hands of those who have better opportunity to give to it the thorough investigation it deserves.

◆

THE WORK OF THE BOSTON BOARD OF HEALTH.[1]

BY S. H. DURGIN, M. D.

THE Board of Health as at present constituted was provided for by City Ordinance in December, 1872, was appointed in January, 1873, and has therefore been in existence little more than nine years.

It consists of three members, appointed by the Mayor for three years each, and confirmed by the City Council.

The establishment of this Board was to a large extent brought about by members of this Society, while the small-pox epidemic of 1872–73 furnished the immediate cause. It derives its authority from the statute laws and city ordinances, and under the former it is instructed to make such regulations as it judges necessary for the public health and safety respecting nuisances, sources of filth, and causes of sickness.

Its duties are to enforce the health laws and ordinances, and to make and enforce such regulations of its own as will secure the greatest comfort to the inhabitants and immunity from disease.

The office, in Pemberton Square, is open for the transaction of business from nine A. M. till five P. M. daily, except Sundays and holidays, when it is open from ten to twelve A. M.

The officers and employees of the Board are as follows: There are four clerks and a messenger in the office; a city physician and assistant; a port physician and assistant, with ten officers and employees in quarantine; a superintendent of health, with four hundred and seventy-six officers and employees; one medical and nine other inspectors; eight superintendents of burial grounds; five attendants for public bath-houses; a superintendent of the city morgue; one inspector of live animals and meat at the abattoir in the Brighton District, and a changeable number of nurses and attendants at the quarantine hospitals, at Gallop's Island, and the Small-pox Hospital in the city.

The duties of the City Physician and assistant are to render all necessary medical aid required at the Jail, the Court House, and Temporary Home in Chardon Street; to vaccinate and re-vaccinate all who apply for it at the office in Chardon Street from ten to twelve daily; to examine all applicants for appointment in the police and fire departments; to investigate and report the cause of death of persons dying without a physician in attendance; to examine cases of reported small-pox before sending to hospital, and to perform such other duties as may from time to time be required by the Board of Health.

The Port Physician and assistant are stationed at Deer Island and have the immediate charge of quarantine, and have additional work in the institution hospitals at Deer Island.

The Superintendent of Health has charge of cleaning the streets, collecting offal, ashes, and house-dirt, and performs such other duties as may be required by the Board of Health.

The functions of the Board as prescribed by the laws and ordinances may be classed under two heads, special and general. Under the head of special we may mention that the Board provides and operates a quarantine for infected vessels in the harbor, hospitals for quarantinable diseases at Gallop's Island, and a hospital for small-pox in the city. It has the care and custody of all the public burial grounds in the city (fifteen in number), must keep them in good condition, free from nuisances and trespassers, and may point out the place, depth, width, and range of all graves therein.

It has the special care and regulation of the Brighton Abattoir, and provides an inspector to see that none but healthy animals are slaughtered, and that the regulations of the Board are strictly obeyed.

It has the oversight and regulation of lying-in hospitals, which are licensed only on the recommendation of the Board of Health, and of the baby-farms, and prosecutes those who attempt to maintain such institutions illegally. It has the care and maintenance of the public bath-houses (sixteen in number), and provides them with superintendents for the care of the bathers and the enforcement of its regulations.

It provides the public urinals and closets along the streets and in the public inclosures, and furnishes them with the supervision necessary for cleanliness and the convenience of the public. All licenses for collecting grease and bones, peddling fish and lobsters in the streets, removing stable manure, storing and curing hides and horns, and keeping cows, goats, swine, and fowls, are granted by the Board of Health, and conditions are imposed with each license in the interest of cleanliness. All contracts with the city for the removal of night-soil and cess-pool contents must be approved by the Board, and the execution of the work as well as the cleaning of the streets, collecting of ashes, offal, and house-dirt must be done to the satisfaction of the Board.

It must assign places for the exercising of offensive trades, and may prohibit the same in places not so assigned.

It must provide immediately for any person who falls ill with a disease dangerous to the public health, and may enforce the vaccination or revaccination of all such persons as cannot furnish satisfactory evidence of successful vaccination within five years.

It approves the certificates of the causes of death, and furnishes such certificates when they cannot be properly obtained elsewhere.

It reviews the acts of the Inspector of Provisions, who is appointed by the Mayor, and decides all cases of appeal from his acts.

Under the head of general duties, a very large number and variety of nuisances are comprehended by the statute law, which reads as follows: "The Board shall examine into all nuisances, sources of filth, and causes of sickness within its town, or in any vessel within the harbor of such town, that may in its opinion be injurious to the health of the inhabitants, and the same shall destroy, remove, or prevent, as the case may require."

---

[1] Read before the Suffolk District Medical Society, May 10, 1882.

There is no form or ceremony necessary in lodging a complaint or request with the Board of Health. They are received from all sources, by all methods, and at nearly all hours of the day. The daily average number of complaints received is about forty, and the number has been as high as four hundred in one day.

It is the custom, except in most urgent cases, to give the new complaints of to-day to the inspectors to-morrow morning. A report upon the alleged nuisance will be made in writing by the inspector the following morning, when a notice will be sent from the office to the owner or occupant of the building or premises where the nuisance is found, pointing out the unsanitary condition, and suggesting that the necessary means of relief will undoubtedly be employed.

Another inspection is made in a few days, and if the remedy has been applied the officer so reports, and the complaint is marked off. Otherwise a second notice may be sent, a prosecution commenced, or the Board may make the repairs at owner's expense; or, if it is a dwelling, a majority of the Board may visit, order the tenants out, and in due time close up the building, which cannot thereafter be occupied without a written permit from the Board. The inspectors employed to do this work are men of average skill, and some of them are experts, and can do the best work.

The character of the complaints made at the office are something as follows: Bad odors in or about the house; house drain defective; traps defective or wanting; cellar damp, wet, or filthy; water-closet defective or unclean; rain conductor delivering sewer-gas under the windows; sink or house-drain discharging on the surface of the ground; stagnant water or filth on vacant lot; defective, overflowing, or offensive vault or cess-pool; exposed manure or offensive stable; fowls, goats, swine, or cows improperly cared for; offensive mud flats; sewer outlet; chimney smoke; bone boiling; fat rendering; street sprinkling; green hides; fertilizers; offensive trades and employments of all kinds; noisy and early fowls; and fish venders. In short, almost anything that offends the sense of smell, sight, or hearing, or is otherwise injurious to health or estate is likely to be complained of and require investigation; most complaints are well founded, some are frivolous, and all must be looked after.

The number of nuisances abated by the Board last year, where notices had to be served on the owner or occupant, was 7581. In addition there were nuisances of greater or less magnitude abated by the disinfecting corps. Of the 7581 nuisances, 2625 were on account of defective drains, and 1320 were from inefficient trapping.

The examination of house-drainage, plumbing, and trapping is the most difficult work the inspectors have to do, and requires the most skill and patience. It is gratifying to observe the decided change of opinion in the community within the last few years in regard to sanitary questions generally, but particularly with reference to house-drainage. The inspection of whole blocks of houses from year to year, selected in different parts of the city, without reference to any complaint or known condition, has shown a large decline in the percentage of defective drains and inefficient trapping.

Ten years ago it was a day's hunt to find any house-drain ventilated; to-day it is the rule in building and repairing to extend the open soil-pipe through the roof, and the demand for such improvements is not only popular but increasing. A few years ago sanitary inspectors were forcibly driven from premises by angry landlords; to-day they are welcomed nearly everywhere and obstructed nowhere.

If we compare the present sanitary condition of Boston with that of ten years ago, we find a pleasing contrast in many things in favor of the present. The streets are well swept and kept clean; house offal, house dirt, and ashes are promptly removed in a neat manner; dead animals of all kinds are quickly removed from the city; slaughter-houses have been entirely abolished within the city limits except at the abattoir; bone-boiling and fat-rendering establishments, lime-kilns, phosphate works, and a variety of other offensive trades have been reduced in number, and those remaining have been so changed and regulated as to be comparatively unobjectionable. The storing and curing of green hides and horns have been regulated and deprived of the most objectionable features; the condition of stables and the method of removing manure from them have been greatly improved; the old and offensive method of removing night-soil by bucket and wagon has been superseded by a new and nearly odorless process, which may be used at noonday without any trouble whatever; our tenement houses, numbering nearly four thousand, have been much improved in respect to cleanliness, overcrowding, ventilation, and drainage; grease, bones, and other refuse material used in fat rendering are neatly gathered about the city in clean carts (which are licensed for a month only at a time and reviewed as often) and promptly removed; baby farms and lying-in hospitals have been regulated and placed under surveillance; dead bodies are no longer buried before the presentation of the death certificate and the registration laws complied with; public urinals are now found along the main thoroughfares of the city and in the public inclosures.

The old-time salt-and-snow freezing mixture on the sidewalks has been wholly prohibited, and some headway has been made in stopping the use of salt in the streets; thousands of cellars and basements have been condemned as dwelling places and converted into other uses; hundreds of acres of land, wet and spongy, have been drained. The great intercepting sewer, through much tribulation, has been nearly finished, and may be used within two years; the death-rate from all causes has been materially reduced, but particularly so with regard to the preventable causes; small-pox has been stopped, and the city kept almost from it for nine years; scarlet fever has been reduced from an endemic condition, with an average yearly mortality of 399 (1867 to 1876) to an average of 77 deaths yearly for the last five years; diphtheria has been more defiant to the moderate measures which the Board of Health has felt at liberty to adopt.

In cases of small-pox the Board immediately makes isolation complete, either in hospital or at home, and obliterates every trace of infection that can be reached about the premises, and protects by vaccination all other persons who may have been in any way exposed to the contagion.

Scarlet fever and diphtheria have been measurably kept from the public schools and isolated by the palliative measures and advice which have been used. This the writer does not deem sufficient, and believes the time has come when the Board of Health should be upheld in using the same decisive measures for isolation in hospital or elsewhere, and for disinfection, etc., in these two most destructive of the preventable diseases, as is now so effectually used in cases of small-pox; not, perhaps, with the expectation of accomplishing quite as much with them as with small-pox, but to do what reason and experience teach us will undoubtedly reduce the frequency of, if not eradicate, the diseases.

In the absence of Dr. Heath, the Port Physician, who was to have given you a brief paper on our quarantine service this evening, but who has been unable to leave other duties, I will in a few words give you an idea of what is done in that branch of the department.

This quarantine has been administered in the same way for the last sixteen years. There are two physicians stationed at Deer Island, who find employment during the year in the quarantine service and in the hospitals of the public institutions. The regulations require that during the summer months, from June to November, all vessels arriving from foreign ports and from American ports south of Virginia be examined by the Port Physician or his assistant, and passed by written permit, before coming up to the city.

If a case of contagious disease is found on board it is removed to one of the hospitals on Gallop's Island, and the vessel thoroughly fumigated by burning sulphur, one and a half pounds to each one thousand cubic feet of space. All immigrants are vaccinated or re-vaccinated on arrival here, when they are found not to be sufficiently protected.

Infected cargoes which cannot be otherwise properly treated are removed to Gallop's Island and there disinfected or retained until cold weather, as in case of infection by yellow fever.

A good steamer is provided and well officered. There are two good hospitals at Gallop's Island for different diseases, and a sufficient number of tents for any emergency in warm weather.

We have a few cases of typhus and yellow fevers each season, and occasionally cases of small-pox to be taken from vessels. From five hundred to six hundred vessels are examined each summer, and from ten to twenty of this number will require detention in quarantine from a few hours to two days. Winter regulations require only such vessels to stop as have sickness of a contagious character on board during passage or on arrival here.

THE SMALL-POX EPIDEMIC IN BOSTON.[1]

BY J. H. MCCOLLOM, M. D.

After a comparative immunity, extending over a period of more than eight years, a few cases of variola, not, however, at any time sufficient in number to be worthy the name of an epidemic, appeared in Boston. A boy about twelve years of age living in an apartment hotel in Ward XIX. was the first victim; a few isolated cases had, however, previous to this time been reported. He communicated the disease to all the members of this family of six except the mother, who had been vaccinated. The father and one brother, neither of them vaccinated, succumbed to the disease. Every one in the immediate vicinity was vaccinated, and also, as far as was possible, every one who had visited this family. A man living in Ward VII. in a large boarding house contracted the disease from this scource; but as it was early recognized, promptly removed, and the people in the house all vaccinated, there were no new cases in this locality. In December two more cases were reported in Ward XIX. in a boarding house. A young man and a girl, brother and sister, contracted the disease from some unknown source. They were removed to the hospital, and the members of the family vaccinated. A third person in this same house came down with the disease a short time after the others were removed; but this case could not be traced to the previous ones. At about the same time a case appeared at the City Hospital, and although this patient was removed as early as it was possible to do so, she gave the disease to two persons who were near her in the ward; one a patient, the other a nurse. A short time after a case, which could not be traced, appeared in Ward XVI., and the patient was removed to the hospital, where, after a severe illness of eleven days, he died.

This was an extremely severe case, and although the patient stated that he had been vaccinated, and one imperfect scar was visible on his arm, I very much doubt if he ever had the true vaccine disease. The appearance of the eruption and its course were characteristic of unmodified small-pox rather than that of a fatal case of the modified disease. This patient, although he was taken sick in a hotel, did not communicate the disease to any one in the house. On the same day that the previous case was removed a case was reported on North Street. This man had not been vaccinated, and he died after he had been in the hospital twelve days. As this case occurred in a crowded boarding house, in a room occupied by four or five individuals, there was every reason to fear that the disease would spread; but fortunately, owing to the speedy removal, efficient vaccination, and thorough fumigation, no new cases appeared in this locality. The disease, in this instance, was contracted in New York. It would now be very interesting to compare a very mild case of modified small-pox with an equally mild case, as far as the eruption is concerned, of the unmodified disease. These two patients were of the same age, were taken sick at the same time, and had the same amount of eruption. It very rarely happens that one meets with two cases so nearly alike in regard to the extent of the eruption, and this renders them more valuable for comparison. In the unvaccinated the disease was of longer duration, the constitutional disturbance was greater, and the secondary fever was marked. The eruption passed through the regular stages of papule, vesicle, and pustule, giving rise to considerable pain and discomfort. The vaccinated person was not sick after the initial fever, which, although severe, lasted only two days. The eruption after coming to the vesicular stage in this case in many places shriveled up, and did not become pustular. The unvaccinated person was in the hospital thirty days, while the vaccinated was there only nineteen. Another case deserving attention was that of a young woman, who was vaccinated three days after exposure to small-pox on shipboard, and who had a very mild attack of the disease. In this case the vaccine vesicle went on to maturity, while the small-pox eruption aborted almost entirely. The eruption had nearly all disappeared from the body before the arm had healed. It is not an uncommon thing for the eruption to abort to a certain extent, but it is an unusual occurrence for so much of it to disappear without coming to maturity as in this case, even in the recently vaccinated, and never in the unvaccinated. Three other cases of a similar nature were observed at the hospital; two were adults who were vaccinated immediately on exposure, and had very mild attacks of the disease. The other case was that of a child three months old, who contracted the disease from its father, and was immediately vaccinated on exposure. This was a primary vaccination, and its effect on the disease was very marked. The eruption did not pass through the regular stages, but after becoming vesicular disappeared somewhat as varicella does. On the other hand, one case was observed which was vaccinated one week after exposure. At the time of the appearance of the small-pox eruption the vaccine vesicle was at its maturity; but it did not in any way modify the disease, which went on to a fatal issue. It is a well established principle that if the vaccine disease does not arrive at maturity before the appearance of the variolous eruption, the former does not in any way modify the latter. If a patient, therefore, is vaccinated one week after exposure to small-pox the vaccination will have no effect on the disease if contracted at that time.

---

[1] Read before the Suffolk District Medical Society, May 27, 1882.

There have been six cases of the hæmorrhagic variety in this city since last September, all of which, with the exception of one, died. Five of these cases were treated at the hospital, and the remaining one at his home. The case that recovered was a very remarkable one, and deserves passing notice. The patient, a sailor, who contracted the disease in Philadelphia, came from Somerset on the second day of the eruption, and applied for treatment at the office of the United States Marine Hospital Service in the Custom House, where the disease was recognized, and the Board of Health notified. For eight days the man hovered between life and death; owing, however, to the heroic administration of alcoholic stimulants, small doses of opium, and large doses of quinine, at the end of this time he commenced to rally and finally recovered. Large blebs filled with bloody serum formed on the chest and legs; spots of ecchymosis appeared on the conjunctivæ; there was, however, no hæmorrhage from the rectum as is usual in these cases. A very severe case of confluent small-pox in an unvaccinated person has just been discharged from the hospital. The man probably contracted the disease from rags. This case is of interest solely from its severity. The patient recovered with the loss, however, of one eye, most of his hair, and many of his nails. This case and most of the others were, with the exception of the hæmorrhagic ones, treated by the administration of the sulphocarbolate of sodium and stimulants. Milk has been the principal article of diet, and it has been given in as large quantities as the patient could be induced to take.

Since last May sixty-five cases have been reported to the Board of Health; thirty-six of these were males, twenty-nine were females; thirteen were children, and fifty-two were adults. There were twelve unvaccinated persons among the number. Five were revaccinated at the time of exposure. In regard to the revaccination of the other cases, there was no evidence that they had been successfully revaccinated at any time. Those who were vaccinated at the time of exposure had very mild attacks of the disease, and in many instances were not confined to their beds more than a day or two; there was no pitting in these cases. Nine out of the twelve unvaccinated persons died, while only four out of the vaccinated. Thus the proportion of deaths is seventy-five per cent. in the unvaccinated, and seven and one half per cent. in the vaccinated. This is a most powerful argument in favor of vaccination and revaccination, and would seem to be sufficient to convince the most skeptical. Another argument in favor of vaccination is the fact that out of thirteen children who were admitted only three had been vaccinated in infancy, and these recovered.

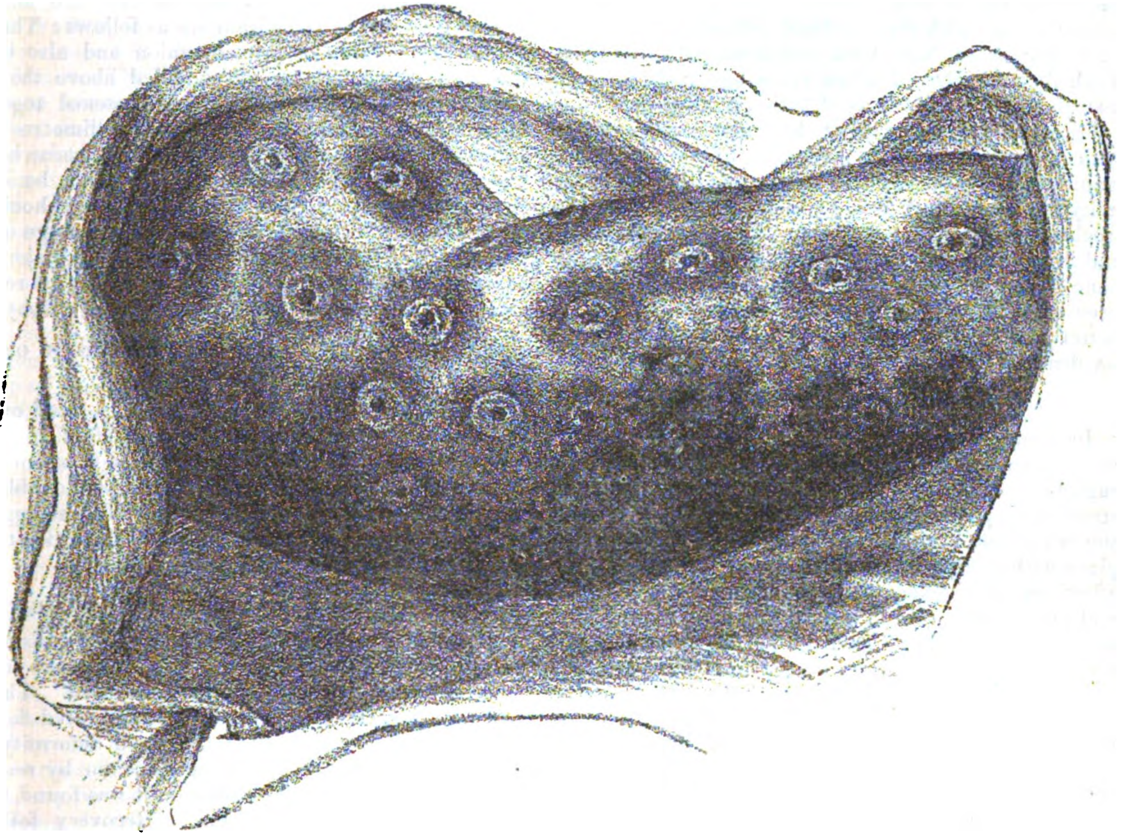
Vaccination, isolation, and fumigation are the *three* agents for the prevention of this disease, and when they are fully and carefully conducted no epidemic need visit a city. Revaccination, too, is as important as primary vaccination, but it is much more frequently neglected.

As we have seen that one case not reported, but allowed to run its course, gave rise to eleven cases, it is very clear that if these cases had not received attention the disease would have increased very rapidly. In only five instances did a second case follow the removal of the patient, and in all of these the persons attacked occupied the same room, and in some instances the same bed, with the patient.

There is no doubt that the comparative freedom from small-pox in this city is due to the efficient measures of the Board of Health.

Before closing I wish to call the attention of the Society to one case of accidental vaccination. This occurred at the city stables in Roxbury. A cow purchased at Brighton was found to have an eruption on the udder and teats. The man who had charge of her, and who milked her, vaccinated himself on the right hand, near the base of the thumb. When this was seen it was a well-marked, perfectly characteristic vaccine vesicle. One very interesting fact in connection with this was a herpetic eruption about the edges of the old vaccination scars on the left arm. One case of variola equina, occurring in a man who had the care of sick horses, was observed. It was through the kindness of Dr. Hartnett that I was enabled to see this patient. The man was about forty years of age, and had the charge of three horses that had a discharge from the nose; they also had what is known as grease. This disease is described by some authorities as variola equina, while others make a distinction between grease, a local disease, and constitutional grease or variola equina. The man had inoculated himself from these horses. On the face the disease was confluent, therefore the characteristic appearances were not apparent, but on the side of the neck and on the forehead, well marked button-like, umbilicated spots with distinct areolæ were seen. There was no eruption on the arms, legs, or chest. The constitutional disturbance was comparatively slight, and the man finally recovered, although he was considerably pitted.

The case about to be reported is entirely unique; the record of a similar one I have been unable to find anywhere. Mrs. B., a healthy woman, the mother of two children, was vaccinated February 13th with bovine virus by her family physician, Dr. Harris, of Roxbury, through whose kindness I saw the case, and to whom I am indebted for the following notes: On the fifth day after vaccination the patient complained of headache, was feverish, and, in fact, had the usual amount of discomfort that attends a successful revaccination. Mrs. B. was at this time nursing her infant, a child about six months old. The child had not been vaccinated on account of eczema from which it was suffering at that time. On March 1st, as nearly as the mother can remember, an eruption appeared on the head, thorax, and legs of the child, who had been feverish and irritable for two or three days previous. On some portions of the body the eruption was confluent, but on the arms and thighs it presented the characteristic appearance of cow-pox. It was not an instance of accidental inoculation, for there was no possible way by which the child could have introduced the virus at so many different points. The disease must have been contracted from the mother through the medium of her milk. The child was not very sick, although there was considerable discomfort from the eruption. The drawing gives a remarkably good idea of its appearance. In order to test the matter more thoroughly, Dr. Cutler, of Chelsea, charged a few points with the lymph, and inoculated a cow on the vulva. On March 15th I received a note from him in which he says, "I send you points taken to-day from a perfect vesicle planted upon the vulva of an animal seven days ago. The vesicle has an elevated base, a smooth, regular, perfectly spherical margin, is not yet umbilicated, and has all the characteristics of a pustule resulting from a series of human transmissions. This puts beyond cavil the question of identity in the Roxbury case." The final proof of the accuracy of the diagnosis, the submitting a human being to vaccination with this virus, was not attempted.



RECENT PROGRESS IN SURGERY OF JOINTS AND OF DEFORMITIES.

BY E. H. BRADFORD, M. D.

OPERATIVE TREATMENT OF THE SEVERER FORMS OF CONTRACTURE AND ANCHYLOSIS AT THE HIP-JOINT.

Rosmanit,[1] whose personal experience in the matter was during his service as assistant at Billroth's klinik, has collected a valuable number of cases of this distortion. The article refers entirely to cases requiring operative intervention, exclusive of those which can be benefited by means of apparatus and extension. He admits that it is almost impossible, if not quite so, to determine accurately the exact nature of a contracted hip-joint, whether bony anchylosis or simply fibrous adhesions are present or not.

In considering this the nature of the previous inflammation, the duration of the contraction, and the age of the patient have to be considered. The therapeutic measures which can be employed are: (1) in the mildest cases simple extension by weight and pulley; (2) *brisement forcé*, with one or more sittings, followed by fixation by weight and pulley and plaster of Paris; (3) tenotomy, myo- and fasciotomy as a prelude to *brisement forcé*. The skin, as Volkmann has shown, is not of much importance in maintaining the contraction of the hip-joint, but the fascia lata is, particularly the intermuscular ligament between the rectus and tensor vaginæ femoris muscles.

Froriep has shown that in the contraction of the hip and knee the muscles are not as powerful in fixing the distortion as the connective tissue. Winiwarter has recently revived and Billroth performed the open incision of the soft tissues in contractions of this sort. A V-shaped incision is made from Poupart's ligament to the front of the thigh, the size depending upon the amount of contracted tissue. After the division of the skin and fascia attempts should be made to straighten the limb, which sometimes can be done without division of the muscles; this, however, can safely be done, even down to the capsule of the joint.

---

[1] Archiv f. klin. Chir., 1882, 28th Bd., 1, i.

After the limb has been straightened it should be fixed either by plaster of Paris or by extension, with fixation of the pelvis, the choice depending upon the experience and preference of the surgeon. In cases of bony anchylosis or firm fibrous adhesions correction of the deformity can only be done by manual or instrumental osteoclasis or osteotomy. Manual osteoclasis is apt to cause a fracture, which, however, experience has shown not to be a disaster. The writer seems not to be familiar with the excellent osteoclast devised by C. F. Taylor, of New York, and described in the New York *Medical Record* a few years ago, and he rejects instrumental osteoclasis as of little practical use.

Osteotomy of the neck of the femur is an operation with a mortality of fifty per cent., according to Volkmann's experience. In the practice of others the mortality has been much less, — 11.43 per cent. In subtrochanteric osteotomy the mortality was 8.82 per cent., and in twenty-eight cases of wedge-shape excision of bone 7.14 per cent. Resection of the hip-joint has been advised and performed in the hopes of gaining a better result than after osteotomy. Out of thirty cases six deaths were recorded, a mortality of thirty per cent.

ANTISEPTIC RESECTION OF THE KNEE.

In France the operation of excision of the knee has never been popular. The writer (Boeckel[1]), however, reports his experience with thirteen cases done under strict antiseptic precautions. Primary union he considers the rule in this operation, and consolidation took place within fifty days. Of the thirteen two died of affections overlooked before operation, — endocarditis and pleural effusion; in a third subsequent amputation was necessary. The writer did not find that the antiseptic dressing delayed repair. The H incision is preferred. The patella and the quadriceps extensor synovial sac are removed, and great care should be taken that the sawn ends fit accurately. All diseased parts should be thoroughly scraped away, and after the operation the limb should be elevated. Suture of the bones the author does not advise, but thorough drainage is necessary, not only on the sides of the incision, but also vertically in the centre, reaching down to the vessels; the drainage tubes should, however, be removed early, all being out by the third dressing. Lister dressing and a fixed appliance are essential. The writer advises an early operation.

RESECTION OF THE KNEE.

Hahn[2] has exhibited three patients on whom he performed resection for purulent inflammation of the knee, where primary union took place, and bony anchylosis in four weeks in two, and in a third eight weeks.

He considers removal of the synovial membrane, when diseased, important.

In partial resection motion may be hoped for in an ideal result, but this is not to be expected in complete excision. The reporter has performed the operation twenty-three times since February, 1881. Of these, three died: one of diphtheria, one of septicæmia through imperfect antiseptics, in the opinion of the writer, and one of general tuberculosis. Of the remaining, in sixteen primary intention followed, and in four primary intention did not take place, but recovery apparently did; in two the result was not determined, as the operation had been recently performed. The method of operation was as follows: An Esmarch bandage was applied, and an incision made direct down to the bone, using an ordinary amputating knife, the incision being through the quadriceps extensor tendon just above the patella, and reaching from side to side. The knee is then strongly flexed, and the synovial membrane dissected out; the rest of the operation is done in the ordinary way.

The advantages of this incision over the anterior flap method or the H incision are as follows: There is greater probability of primary union and also better drainage; the patella is never pulled above the knee after cure. The bones should be fastened together, for which purpose a steel pin three millimetres thick and ten centimetres long is fastened to a trocar handle and driven through the skin and bone by a hammer; three pins are usually enough. The pins should be removed at the end of three weeks. The age of the patients was from five to fifty-five. In the majority of cases of the children it was only necessary to remove the bone above and below the lines of the epiphyses.

RESECTION OF THE KNEE AND RESECTION OF THE ASTRAGALUS.

Kraske[3] showed a successful case operated on four years before. The wound united by first intention, and the patella, which was sawn through, is united by bony union. The patella appeared to be movable, and not united to the anchylosed bones. He also reported three cases of resection of the astragalus, with the result of a normally useful foot in all cases.

HEREDITARY CONGENITAL LUXATION OF THE ANKLE

Kraske[4] exhibited a patient with this unusual deformity. The femur was smaller than normal and the tibiæ deformed, especially at the lower end. The feet had the appearance in general of exaggerated flat feet. The patient's son inherited the same deformity, and when thirteen years old was operated on by resection of both ankles. At the operation it was found that a luxation was actually present. Recovery followed, with an improvement in position of the feet.

A second child of the same parents suffered from the same deformity, but died when thirteen months old; the specimen was preserved, demonstrating the lesion.

ANTISEPTIC RESECTION OF THE HIP.

Boeckel[5] advises resection in suppurative hip disease in cases where the patient is failing, and in the non-suppurative cases where crepitation is marked. If the external surroundings of the patient are good in suppurative cases he advises incision, emptying of the pus, and drainage. The indication is the same in acute osteo-myelitis and ostitis juxta epiphysaria. He favors subtrochanteric incision, and removal, as far as possible, of the fungous synovial membrane and clearing the acetabulum. The external incision is not sewed. Extension is to be applied for several weeks. At the end of four to six weeks the patient is allowed to get up, extension being applied at night, crutches and a raised shoe on the well foot being used in the daytime. In from three to four months the limb can be used. The author reports a small number of cases, but with good result.

---

[1] Bull. et Mem. de la Soc. de Chir. de Paris, t. vii., p. 571.

[2] Congress of German Surgeons.

[3] Congress of German Surgeons.

[4] Congress of German Surgeons.

[5] Gaz. med. de Strasbourg, 1882, No. 1.

STATISTICS OF RESECTION OF THE HIP-JOINT UNDER ANTISEPTIC PRECAUTIONS.

Grosch[1] has collected one hundred and sixty-six cases of this operation, done under strict antiseptic precautions. In presenting the cases he has grouped them under heads corresponding to the condition of the joint at the time of the operation. The first stage he classifies as that where the pathological change is slight, and where the suppuration, slight in amount, has not worked to the outside. In the second stage fall those cases with extensive suppuration and established fistulæ. The third class comprises those patients who have become much reduced by prolonged and extensive disease. Out of one hundred and twenty cases watched to the end, forty-four died, a mortality of 36.7 per cent., a percentage which corresponds with that of Guy's Hospital, Volkmann's klinik, or the Copenhaven clinique, and is lower than Culbertson's tables taken from cases not all treated antiseptically, and is much lower than Leisrink's mortality before the introduction of the antiseptic method, 64 per cent. Furthermore, dividing the cases into two groups, those occurring between 1870 and 1875, during the apprenticeship of the antiseptic technique, the percentage of mortality was 9 per cent. higher than since that time. The mortality in the first stage of the disease among children was 0 per cent., in the second stage 24.1 per cent., and in the third 67.5 per cent. Antiseptic dressings do not seem to have effected any change as to the usefulness of the cured limb as compared to that before the method was introduced. This is a matter which is not yet definitely settled, but a number of cases were established where an almost normal usefulness of the limb had remained unimpaired many years after the operation.

Where, during the operation, perforation of the acetabulum occurred, the percentage of mortality increased twenty per cent.

The writer farther found that the duration needed for recovery was not influenced by the antiseptic method of dressing, but it gave a greater immunity against wound complications.

CONSERVATIVE TREATMENT OF SEVERE HIP-JOINT DISEASE.

In contrast to the above the excellent paper of Dr. Judson[2] is of value. The patients were all unfavorable as regards prognosis, but excellent results, much better than could have been obtained by excision, were gained by a careful treatment, after from two to three years' treatment. The treatment was according to the mechanical plan. Dr. Judson justly says, "As hip disease derives its desperate character (its quasi malignity) from the difficulty experienced in securing rest, and not from the nature of the disease, which is sufficiently amenable to treatment when occurring in other parts of the body, it follows that the rate of mortality is diminished by providing efficient rest, and avoiding the risks of operation."

RICKETY DEFORMITY OF THE NECK OF THE FEMUR.

Fiorani[3] has observed in fifteen cases a deformity which caused a limp in gait, suggesting hip disease. Motion, however, at the hip-joint was perfect. The head of the femur was in place in the acetabulum, as is not the case in congenital dislocation, but the trochanter was thickened, and nearer the crest of the ilium than normal. This the writer explains as a rickety curvature of the neck of the femur on the supposition that instead of the usual obliquity of the neck downwards from head to shaft, a reverse obliquity exists upwards from head to shaft. The shortening in some of these cases was quite marked. No autopsies demonstrated this hitherto undescribed deformity.

CONTRACTION OF TOES.[4]

Beside the distortion known as hallux valgus, dorsal and plantar contractions are not unfrequently to be met.

Dorsal contraction may follow cicatrices from loss of substance, and frequently the small toe will be found extended at the metatarso-phalangeal articulation, and lying obliquely upon the other toes. The writer is of the opinion that this may in certain cases result from other causes than the pressure of shoes; sometimes this follows a contraction of the tendon secondary to inflammation of the metatarso-phalangeal joint. In one of these cases Nicaladoni divided all the extensor tendons, and fixed the toes in an exaggerated flexed position for several weeks. The patient was then furnished a shoe with an inner sole reaching only to the head of the metatarsal bones, and an upper pressing the toes downwards.

Plantar contraction is less common. One case is reported following a wound in the ball of the great toe. Cure followed division of the tendon of the flexor longus pollicis and proper fixing apparatus. A flexed contraction of the second toe alone is not so very uncommon, usually from narrow shoes, as has been described by Paget and Hueter. Cases of congenital distortion of this sort have also been described.

MECHANICS OF STANDING.

Beely,[5] in opposition to the usual opinion, believes, basing his opinion on plaster casts taken from the sole of the foot when standing, that the points of the foot which bear the weight in a standing position are, when both feet are in use, the heads of the second and third metatarsal bones and the os calcis. When one foot alone is used to stand upon, the tuberosity of the fifth metatarsal shares with the other bones, as above mentioned, the weight of the body.

RESECTION OF HALF OF A VERTEBRAL BODY.

Israel[6] in opening an abscess in the lumbar region of a patient thirty-four years old with scoliosis persisting since boyhood, and suddenly accompanied by paralysis, found extensive disease of the bone. He resected a diseased portion of the twelfth rib, and scraped out the carious portion of the diseased vertebral body, penetrating into the vertebral canal, from which a quantity of pus discharged. The patient did well for five weeks, when an empyema resulted and death followed. The operative interference had no effect upon the paralysis.

---

[1] Centralblatt f. Chir., No. 14, 1882, p. 229.

[2] History of Three Cases of Hip Disease in the Third Stage. New York.

[3] Centralblatt f. Chir., No. 16, p. 264, 1882.

[4] Nicaladoni, Centralblatt f. Chir., 1882, No. 16, p. 266.

[5] Arch. f. klin. Chir., 1882, Bd. xxvii., Heft 2.

[6] Berliner klin. Woch., 1882, No. 10.

OLD FRACTURES OF THE VERTEBRÆ.

Küster[1] reported at the last Congress of German Surgeons two cases of complete and permanent recovery from fracture of the spine mentioned by him a year before. In one paralysis of all the extremities had been present.

REDUCTION OF A DISLOCATION OF THE THIRD CERVICAL VERTEBRA FOUR MONTHS OLD.[2]

The patient was fifteen years old, and the distortion followed an accident in the gymnasium. The symptoms, which had remained thirteen weeks after the accident, were a slight paresis of the bladder, lameness in the left leg, and loss of power in the left arm and forearm. A prominence of the spinous process of the third cervical vertebra existed, the head was held sideways, and a depression could be felt in the pharynx, and there was difficulty in swallowing. Four months after the accident the patient was etherized, and the head twisted and pulled straight. The deformity recurred in a few weeks, and was again corrected, the reduction taking place the second time with a snap. All symptoms disappeared immediately, and the patient remained well.

SYPHILITIC AFFECTIONS OF THE JOINTS.

Schüller[3] classifies these affections as, first, those following acquired syphilis. (*a.*) Acute, with serous effusion accompanying an eruption of the skin. (*b.*) Acute, subacute, or chronic, with serous effusion accompanying the later stages of tertiary, characterized by a papillary growth on the synovial membrane, and sometimes by ulcerations and cicatrices of the cartilage. (*c.*) Arthritis secondary to gummata of the joints. (*d.*) Arthritis secondary to or accompanying periostitis, ostitis, or osteomystitis.

Second. In hereditary syphilis. (*a.*) Subacute serous inflammation of the joint with swelling of the capsule without change in the bone, but with some change in cartilage. (*b.*) Arthritis following gummata. (*c.*) Arthritis following periostitis, ostitis, etc. (*d.*) Arthritis secondary to syphilitic inflammation of the epiphysis. A specimen was shown taken from a woman forty-nine years old, with characteristic syphilitic lesions. A small quantity of cloudy, reddish fluid was found in the knee-joint, and papillary growths on the synovial membrane. Oval superficial ulcerations were found in the cartilages, some of them cicatrized.

TOTAL EXTIRPATION OF THE SINGLE BONES OF THE FOOT.

Dumont[4] has collected twenty-one cases, namely: nine excisions of the astragalus, four calcaneum, two navicular bone, two cuboid, one cuneiform, one metatarsus. In none of these was a secondary amputation needed.

Fourteen of these were for inflammatory disease, and of these, one died seven years after the operation of some accidental disease, the foot being perfectly useful, two others died of phthisis within a year of the operation. The other eleven recovered with useful feet. The cases were watched for one to five years after the operation.

TREATMENT OF GENU VALGUM.

Schede[5] reported the result of an extended experience at the Congress of German Surgeons, as follows: In place of the tedious treatment of the deformity in young children by apparatus, osteoclasis should be used. The objections to the old method are, first, that correction can only be made by stretching the ligaments on the outer side of the joint, and that before recovery takes place the shortened condyle must grow to a normal length, otherwise a relapse will occur. In rickety children the process of growth of bone is frequently delayed, and therefore a long amount of time is needed before cure. In pauper practice it is difficult to command the patience on the part of the relatives necessary to complete a cure.

Treatment according to Hueter's method of permanent flexion of the affected limb is also uncertain and tedious. In children even between five and six years of age it is possible by the power of the hand to break the femur or the tibia at the point where osteotomy is indicated. An assistant should hold the central portion of the bone to be broken, the operator the peripheral, keeping the hand close to the part where fracture is desirable. Care should be used not to rupture the outer ligaments, and therefore the force should be applied gradually. In fracturing the femur the whole leg should not be used as a lever. Schüller has not found that there is a lack of precision in the site of the fracture. Cure is always easily obtained. A plaster of Paris bandage is applied immediately, and usually in eight days the children are allowed to begin to move about with the gypsum bandage applied. In from four to six weeks the consolidation is complete, and the cure is finished unless before the operation there had been a marked relaxation of the ligaments of the knee. In that case apparatus should be applied and worn.

Schede has operated in all twelve times in double genu valgum, of which two required additional fracture of the tibiæ. Single operations were also done so that in all thirty-three osteoclasis of the femur were performed, and thirteen of the tibia. No complication interrupted perfect recovery in these cases. In older children Schede advises avoiding osteotomy if possible, but he has had excellent results following MacEwen's operation in eleven cases.

Little,[6] whose experience has been mainly in the mechanical treatment of the deformity, suspects that violent measures are sometimes attempted unnecessarily. His practice with the thorough use of apparatus leads him to be confident that a majority of such deformities can be cured without operative interference. When appliances fail he prefers MacEwen's operation. His preference, however, seems based on theoretical grounds rather than personal experience. He subdivides the deformity into several different classes according to the ætiology, regarding the rickety as much the less common, and uses the term atonic to cover a class of cases where rachitis is not well marked.

MacEwen[7] states that he has never operated for the relief of genu valgum on a patient under eight years of age, and has refused to operate on older patients who bore traces of acute or recent attack of rickets, and whose bones were still soft. In children as young as two or three years the operation is to be deprecated, partly because the deformity frequently disappears in the growth of the child and partly because it may recur after that age even if thoroughly corrected. He has found that the femora grow after osteotomy as if no operation had been performed. Up to April, 1881, he had performed eleven hundred and forty-nine osteotomies, with three deaths from accidental causes (pneumonia, diphtheria, tubercular meningitis).

---

[1] Centralblatt f. Chir., 1882. 29, 39.

[2] Gray. Annals of Anat. and Surgery, 1882. Vol. v., No. 2.

[3] Congress of German Surgeons v. Centralblatt, f. Chir., 1882 2, p. 32.

[4] Deutsche Lertsche. f. Chir., 1882, 17th Bd. 1 and 2, p. 1.

[5] Centralblatt f. Chir. 1882. 2, p. 878.

[6] In Knee. London, Longmans, Green & Co.

[7] Trans. Internal Congress, 1882, vol. iv., p. 190.

LITERATURE.

DISEASES OF JOINTS: D'Ambrosio, Electrolysis dans le Traitement de la Tumeur blanche, Tr. Internat. M. Congress, 1881, ii., 389. Masse, Sacro-Coxalgie, Gaz. hebd. d. Sc. med. de Bordeaux, 1882, ii., 50, 52. Ollier, Resections hatives et tardives, Tr. Internat. M. Congress, 1881, ii., 327. Verneuil, Lesions des Articulations, Gaz. d. Hôp., Paris, 1882, lv., 81. Tyson, Cross-Legged Progression, Tr. Clin. Soc., 1881, xiv., 186. Berne, Arthrite Tuberculeuse, Bull. Soc. Anat. de Paris, 1881, lvi., 126. Bidder, Parasynoviale Abscess, Deutsche Zschr. f. Chir., 1881–82, xvi., 277. Fenger and Lee, Opening and Drainage of large Joints, Am. M. Weekly, 1882, xiv., 125. Hutchinson, Path. Specimen of Gout and Rheumatism, Tr. Path. Soc. London, 1881, xxxii., 193. Miaise, Hydarthrose Arthrotomie, Soc. de Chir., n. s., 1881, vii., 829. Bokelman, Hæmophilen Gelenkaffectionen, Göttingen, 1881. Fevrier, Pathogenie des Arthropathies, Par., 1882. Pauschardt, Gelenkneuralgie, Halle, 1881. Yvon, Ankylosis of the Patella, Par., 1882. Albert, Fungöse Gelenkentzündung, Mitth. et Wien. med. Doct. Coll., 1882, viii., 69. Borgehold, Path. und Therap. der Gelenkentz., Arch. f. klin. Chir., 1881–82, xxvii., 721. Andrews, The Fulcrum Action of Contracted Ligaments as an Obstacle to Extension in Joint Disease, Rocky Mountain M. Times, Denver, 1882, 345. Poore, A Case of Cross-Legged Progression, Med. Rec., N. Y., 1882, xxii., 8. Hieler, Arthritis Deformans in a Child, Charité Ann., Berl., 1882, vii., 348. Albert, Artificial Anchylosis in Paralyzed Limbs, Wien. Med. Presse, xxiii., 725.

DISEASE OF KNEE-JOINT: Judkins, Aspiration Knee-Joints, Med. Rec., N. Y., 1882, xx., 370. Allen, Suppuration in the Knee-Joint, Spreading of the Thigh, Thrombosis of the Iliac Veins, Australian M. J., 1882, n. s., iv., 97. Knott, Hey's Affection of the Knee-joint, Dublin J. M. Sc., 1882, 3 s., lxxiii., 479. Lente, A Hitherto Undescribed Lesion of the Knee, Med. Rec., N. Y., 1882, ix., 301. Weskeinan, Streckung imed Mechanik der Kinegelenk Contraction, Berl. klin. Wochenschr., 1882, xix. 365.

DISEASE OF THE HIP-JOINT: Report of Alexandra Hospital for Children with Hip Disease, London, 1881. Allis, What is the best Cure in Hip Disease, Phil. Med. Times, 1881, xii., 451. Cazin, Rectal Touch in Coxalgia, Rev. de Chir., Paris, 1882, ii., 189. Maylard, Double Splint in Affections of the Hip, Glasgow M. J., 1882, xvii., 161. Stokes, Osseous Anchylosis at Hip-Joint, Osteotomy, Med. Press and Circ., London, 1882, n. s., xxxiii., 200. Hutchinson, Adam's Operation, Brit. M. J., 1882, i., 298. Judson, History of Three Cases of Hip Disease in the Third Stage, N. Y., 1882. Owen, Suppuration in the Hip-Joint of an Infant, Lancet, 1882, i., 683. Verneuil, Coxalgie, Gaz. med. de Paris, 1882, 6 s., iv., 216.

DISEASES OF THE SPINE: Allis, Can Pott's Disease be Cured without Deformity? Phil. Med. Times, 1881–82, xii., 273. Baker, Bossus, Golding Bird, Pye, Sayre's Method in Spinal Curvature, Tr. Internat. Congress, 1881, iv., 151–177. Gibney, Diagnosis Pott's Disease, Boston M. and S. Journal, 1882, cvi., 217. Strasser, Spondylolesthesis, Breslau aerztl. Ztschr., 1882, iv., 30, 33. Mitchell, J. K., Extreme Spinal Distortion, Phil. Med. Times, 1881–82, xii., 472. Stillman, Obliquity of Pelvis and Treatment, Sacro-Lumbar Curvature, N. Y. Med. Rec., 1882, xxi., 337–359. Golding Bird, After-Treatment, Mechanical Treatment, and Prognosis, Brit. Med. Jour., 1882, i., 687. Grattan, ibid., 693. Owen, ibid., 690. Smith, ibid., 688. Roth, The Treatment of Lateral Curvature, Brit. M. J., 1882, i.. 691. Vance, Treatment of Caries, Med. Rec., N. Y., 1882, xxi., 623. Schmitt, Spinal Irritation in Children, Memorabilien, 1882, ii., 147. Gibney, Pathological Specimen Paraplegia from Pott's Disease, Illustrated Quarterly M. and S. Journal, 1882, i., 43. Swan, Caries of Spine, Results, Med. Press and Circ., 1882, xxxiii., 287.

KNOCK-KNEE: Baker, Brodhurst, Little, MacEwen, Trans. Internat. Congress, 1881, iv., 192, ff. Abert, Wien. Med. Bl., 1882, v., 161. Cabot, Osteotomy, Boston M. and S. J., 1882, cvi., 155. Morris, Tr. Path. Soc., 1881, xxxii., 160, 163. Schäfer, Osteotomie, Halle, 1881. Albert, Symptomatologie, Wien. Med. Bl., 1882, v., 193. Bouland, Genu Valgum, Dict. Enc. d. Sc. Med., Paris, 1881. Vance, Osteotomy, Med. News, 1882, xl., 624. Robin, Osteoclast for Knock-Knee, Lyon Med., 1882, xxxix., 449. Whelson, Three Cases of Osteotomy, Brit. Med. Jour., 1882, i., 577.

CLUB-FOOT: Green, Club-Foot treated without Tenotomy, N. Y. M. J., 1881. Little, Œtiology Talipes Varus Congenitus, Tr. Internat. Med. Congress, 1881, ii., 412. Terrillon, Resection Tarsus, Bull. gen. de Therap., Paris, 1882, cii., 14. Wagner, Operative Treatment in Congenital Club-Foot, Strassburg, 1881. Nicoladoni, Pes equinus Paralytic, Wien. Med. Presse, 1882, xxiii., 329. Chauvel, Resection of Tarsus, Arch. gen. de Med., 1882, i., 456. Fisher, Extension in Treating Club-Foot, Lancet, 1882, i., 484.

OTHER SUBJECTS: Anger, Appareil destiné à redresser la Direction des Pieds dans les Malformations, Tr. Internat. Congress, 1881, ii., 407. Reverdin, Hallux Valgus, "Bunions," Tr. Internat. Congress, 1881, ii., 408. Leake, Linear Osteotomy, Texas M. and S. Recorder, 1882, ii., 58. Kidd, Pseudo-Hypertrophic Paralysis in Adult, St. Barth. Hosp. Rep., 1881, xvii., 267. Bury, Contraction of Palmar Fascia, Brit. M. J., 1882, 189. Keen, Dupuytren's Contraction of Fingers, Phil. Med. Times, 1881–82, xii., 370. Féréol, Contracture Permanente, Bull. Soc. de Therap., 1882, xiv., 2. Treves, Ostitis Deformans, Tr. Path. Soc. London, 1881, xxxii., 167. Simon, Nerve Stretching in Infantile Paralysis, Brit. M. J., 1882, i., 264. Heise, Osteotomy, Rickety Curves, Halle, 1881. Fenger, Supra-Malleolar Osteotomy in Deformity after Pott's Fracture, Phil. Med. News, 1882, xl., 398. Dive, Paralysis infantile et son Traitement par l'Electricité, Paris, 1882. Barlow, Infantile Paralysis, Brit. M. J., 1882, 734. Dupuytren's Contraction, Illustrated Quarterly M. and S. Journal, 1882. Harris, Constant Spring-Pressure in Bow Legs, Am. J. Obst., 1882, xv., 470. Terrillon, New Apparatus for Correction of Vicious Positions of the Thigh, Bull. gen. de Therap., 1882, cii., 241. Affection of the Wrist-Joint, N. Y. Med. Journal, 1882, xxxvi., 1. Albert, Artificial Anchylosis in Paralyzed Limbs, Wien. Med. Presse, 1882, xxiii., 725. Boeckel, Nouveaux faits d'Osteotomie, Rev. de Chir., Paris, 1882, ii., 463. Küster, Congenital Defect of both Fibulæ, Pes Valgus, Osteotomy of the Tibia, Recovery, Ein Chir. Trien, 1876–78. Onimus, Deformities of the Feet and Leg, Rev. de Chir., Par., 1882, ii., 443. Thomas, Various Means of correcting the Deformities of the Long Bones, Birmingham M. J., 1882, xi., 251.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE AND PATHOLOGY.

ALBERT N. BLODGETT, M. D., SECRETARY.

MAY 27, 1882. Meeting called to order by Dr. GEO. B. SHATTUCK, chairman.

The announcement was made that, owing to circumstances beyond his control, Dr. A. B. Heath would not be able to present the paper he had prepared upon The Work at Quarantine.

MR. ERNEST W. BOWDITCH read a very interesting paper entitled

THE SANITARY ASPECT OF NAHANT, MASS.[1]

DR. H. I. BOWDITCH asked the source of contamination of the meadow, and the cause of sickness among the men employed in draining it.

MR. BOWDITCH replied that the meadow contained a large amount of half decomposed vegetable matter, and in addition to this, much sewage collected there. The men were not affected until the upper end of the meadow had been reached, when the entire force of employees was made sick by the emanations from the soil. The meadow is th enatural catch-basin of a large area of the typhoid district, and much sewage has accumulated. This entire area has been drained, and tide-gates are erected so that the meadow is now dry and no odor can be detected. At present no sewage is allowed to flow on the surface.

---

[1] Medical and Surgical Journal, vol. cvii., p. 97.

DR. J. P. REYNOLDS remarked that the epidemic of typhoid fever which visited Nahant was very interesting from a medical point of view. It was mild in character, as has been occasionally observed in other localized epidemics. The origin and connection of individual cases cannot always be established, but a direct sequence of cases undoubtedly exists. Of the cases treated at Nahant all recovered. Four cases were, for various reasons, removed from Nahant to Boston or elsewhere early in the disease, and these all died.

DR. C. P. PUTNAM asked if these cases were removed on account of the severity of the disease, to which DR. REYNOLDS replied that they were not at first more severe than the other cases, but were removed early in the disease on account of lack of accommodations. They were all servants, and were conveyed either to the hospital or to their homes.

DR. R. M. HODGES stated that he was familiar with the circumstances attending this epidemic, and looked for much good from the searching investigation into its causes and relations. It is safe to say that similar outbreaks will occur in other summer resorts. The total absence of running streams and factories are notable features in this epidemic, as well as the independent water supply to each estate or family. Less favored localities will be likely to suffer more than Nahant has done in a similar outbreak.

DR. WALCOTT spoke in commendation of the plan of drainage which has been adopted by the town, but considers that something more than sewers and drainage is necessary. Lynn, under far less favorable sanitary conditions, escaped, while Nahant was stricken.

DR. CHADWICK asked why the attack occurred last year and not in other years when the conditions were the same. It seemed quite extraordinary that an outbreak of this kind should be confined to one certain time rather than another. The origin might possibly be found in the supply of milk, water, or ice.

MR. BOWDITCH replied that for two years past the ice has been of better quality than formerly. The milk cannot be considered the source of the disease, but the water supply may well be looked upon as a dangerous causative agent.

DR. CHADWICK asked if conditions of drought or rainfall could be supposed to have anything to do with the fever.

MR. BOWDITCH replied that much influence is to be attributed to the weather. The water supply gradually becomes worse until the outbreak occurs.

DR. REYNOLDS remarked that it is now believed that typhoid fever never occurs except from direct contagion. The origin of the first case would be very interesting. The germs of disease from the intestine in the first case might perhaps be supposed to infect drinking water in the immediate vicinity of the patient's dwelling, but this was not supposable in all the cases. The men working in the meadow were near the sewage from some of the fever locations. This is a circumstance in the chain of facts which may explain some obscure points in this epidemic. Another circumstance which must not be forgotten is the fact that the mild cases of typhoid are the most dangerous factors in its dissemination in a community. They are usually not confined to bed, sometimes not long to the house, and fail to appreciate the gravity of the disease or to take necessary precautions against its spread. One case at Nahant was of this type. The patient was a servant, who was thought only indisposed, and was not confined to bed, but who, from lack of care, suffered a relapse, and was removed to Boston. Two severe cases followed in the same house. The dejections from the first case were thrown into the common vault, and thus communicated the disease to other members of the family.

DR. BOWDITCH advised disinfection of alvine discharges by carbolic acid.

DR. REYNOLDS advised digging a trench in the earth, in which the disinfected dejections should be at once covered with dry earth, and the trench afterward filled up.

In reply to a question, MR. BOWDITCH stated that the contamination of drinking water had been traced through the soil from a source seventy feet away. In one case in Newport the pollution was so decided at a distance of sixty-five feet through the soil that the water was colored by the contamination.

At the site of the old hotel in Nahant an artesian well has been driven to the depth of seventy feet, sixty feet below low water, from which good drinking water is obtained.

DR. G. B. SHATTUCK remarked that the hotel keeper had formerly taken his supply of ice from a filthy slough near the hotel site, which was the place where the workmen were made sick by the foul odors arising from the soil. Typhoid fever is now thought never to originate *de novo*, but always from previously existing cases. The fact that we cannot always trace a chain of cases of this disease does not disprove the theory.

The younger men in the profession consider the disinfection of the discharges a very important feature in the treatment of this disease, as its communicability from the alvine evacuations is now everywhere recognized.

The fact that certain people who used the polluted water of Nahant did not take typhoid fever is no proof that this water might not cause the disease in others. Many circumstances might prevent the occurrence of the disease in individual cases, such as infancy, or old age, the previous occurrence of typhoid in the individual, or some other circumstances.

DR. C. P. PUTNAM asked if the residents of Nahant were in the habit of bringing water from any of the native springs, as was done to a considerable extent in Boston last year.

MR. BOWDITCH replied that this was done in certain instances, but in those families where spring water was used the fever occurred as well as in others, probably from the fact that the spring water was not used exclusively, but as a luxury.

DR. G. B. SHATTUCK asked if any arrangement existed for flushing the drains and sewers as at present constructed.

MR. BOWDITCH explained that all the sewers are laid in right lines and intersect at right angles, so that from the man-holes at the intersection of streets it is possible to see through the canal of the sewer in each direction. Salt water is used for flushing, and they are to be flooded once a week or oftener if necessary.

DR. S. H. DURGIN presented a paper entitled

THE WORK OF THE CITY BOARD OF HEALTH, which is published on page 343.

MR. BOWDITCH asked if the Board of Health compile any facts in relation to the *health* rate of the city as well as to the *death* rate.

DR. DURGIN replied that no such record is kept. The Board demands reports only in cases of small-pox, scarlet fever, diphtheria, and typhoid fever. The Board of Health has not received that degree of support and encouragement from physicians which would make it seem expedient to require more detailed reports in regard to other diseases.

Some years ago the Board consulted the physicians of Boston in regard to scarlet fever, but derived very little comfort from them in its efforts. Not without opposition were children coming from houses in which were patients sick with scarlet fever debarred from attending the public schools, and the suggestions of the Board in regard to public funerals in such cases have been entirely ignored. Prior to 1877 scarlet fever caused an average of 399 deaths each year. During this year the deaths were 104. In 1878 the rate fell to 47. In 1879 there was an increase to 140 deaths from the disease, but in 1880 the rate again fell to 43, and in 1881 to 34 fatal cases. How much of the diminished mortality is due to the action of the Board of Health is of course unknown, but there is no doubt that the public schools are the most dangerous points of dissemination of this disease. It is a matter of regret that more energetic measures cannot be adopted for the suppression of scarlet fever and diphtheria. The Board of Health has long desired to institute more stringent regulations in the case of patients sick with the disease as well as in the disposition of the remains after death. Cases often occur in tenement houses in which the disease spreads rapidly and cannot always be followed. It is also a fact which is becoming more thoroughly established every day that diphtheria is always associated with defective drainage. On an average seventy-five or eighty per cent. of the houses in which scarlet fever or diphtheria occur present defective sanitary arrangements. In many houses containing sanitary defects no disease exists though the conditions are favorable for its appearance at any time.

DR. C. P. PUTNAM thought cases of scarlet fever must be milder in severity than in previous years, and asked the opinion of those present.

DR. C. M. JONES stated that in the first two years of his dispensary practice scarlet fever was mild and usually followed by recovery. In the later years, however, the disease has been of a severer type, and frequently resulted fatally.

DR. E. A. W. HARLOW reported four severe cases in one family, of which one resulted fatally. The disease seemed to him to be more severe this year than formerly.

DR. DURGIN remarked that the truant officers afford the Board of Health much assistance by taking a list of cases of scarlet fever and preventing other children from the same houses attending school. Under the precautions which have been adopted by the Board there has been a great and permanent diminution in the number of cases of scarlet fever, and a corresponding lesser mortality from its ravages since 1877.

DR. G. B. SHATTUCK asked the opinion of the reader upon the appointment of a health officer in the public schools.

DR. DURGIN replied that such an officer is much needed to look after the proper heating and ventilation of the school buildings. The officer would be a special sanitary expert, and would no doubt materially increase the healthfulness of our schools.

DR. H. I. BOWDITCH said that he believed the profession at large would encourage and sustain the Board of Health in the enforcement of any measures calculated to counteract so grave diseases as scarlet fever and diphtheria. Physicians would gladly accept any means of modifying their severity and thus lessening mortality.

DR. SHATTUCK fully coincided with the last speaker, and felt sure that physicians would agree with the Board upon any measures to be adopted in the treatment of epidemic diseases.

Dr. Shattuck alluded to the recent experiments of the National Board of Health at the Mechanics' Fair Building in relation to the siphoning of water-traps in soil and other pipes.

Mr. Bowditch has been making some investigations upon this subject, but is not able to give the results of his researches at present. The facts which have been ascertained are interesting, and are different from what would be expected. The experiments were performed by means of traps with glass sections, so that the effect upon the contained water might be observed. These experiments may soon be made public.[1]

DR. J. H. McCOLLOM read a paper upon

THE SMALL-POX EPIDEMIC IN BOSTON,

published upon page 345.

Owing to the lateness of the hour there was no further discussion upon the many important facts presented by the three papers.

DR. SHATTUCK extended the thanks of the Section to the readers of the evening for the interesting and instructive papers which they had presented.

Adjourned at 11.05 o'clock.

— A case of fatal poisoning by toadstools is reported from France. A Rev. Mr. Dodds, who was living in the country with his family, found, while walking in the woods with his children, what he supposed to be mushrooms. They took home an armful, which the cook prepared. The children did not partake of them, but the two adults and the servant did so. They were speedily so much prostrated as to be unable to go for help; the nearest village was eight miles away. By chance a neighbor visited the house after about eight hours. Medical aid and nurses were summoned from Paris, and after a few days all three persons were supposed to be out of danger, but the husband had a relapse, which took the form of peritonitis, and he died.

— The *Medical Record* quotes from the *Deutsch Med. Wochenschrift* a letter which gives a "fling" at the nerve stretchers. The writer speaks of ureter stretching for granular kidney. He has also stretched the hepatic duct for cirrhosis, and intends to stretch not only the pneumogastric nerves, but also the bronchi for chronic contraction of the lung. He also asks, "Might not general paralysis of the insane be cured by simple extraction of the teeth and stretching of the respective twigs of the dental nerves?

---

[1] Sanitary Engineer, August 31, 1882.

Medical and Surgical Journal.

THURSDAY, OCTOBER 12, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE MEDICAL STUDENT.

He has come to town in his usual exuberance of numbers and spirits. Somebody (we believe it is Charles Reade) makes one of his female characters speak of a young man who has disgraced himself by "consorting with medical students and other like abominations." It must be confessed that this lady has only given utterance to what is quite a general sentiment regarding this unfortunate being. He is not apt to be an ornamental member of society. His dissecting-room experiences constitute a large portion of his conversational stock in trade, and he has the bad taste to introduce them on all sorts of occasions; and the chances are that he horrifies the neighborhood by leaving a parcel of bones on the roof, to be found by an enterprising policeman, and to furnish a brief draught of scandal for the thirsty reporters.

All this, and perhaps more, must be admitted regarding the medical student, yet, notwithstanding, he is a good fellow. He is an honest, hard worker, and he feels the satisfaction (unknown to many a less uncouth young man) of mental growth. He is no *dilettante*. He runs about all day to lectures, and hospitals, and dispensaries, and then generally gives a solid evening to his books. He gets much satisfaction out of very vile tobacco, and is usually contented with the amount of alcohol to be found in beer. Even on the few occasions when he does take recreation, he is apt to patronize that form of the drama which gives him the best opportunity to review his anatomy. He has no very high notions of art, but he does attend pretty faithfully to what he is here for. He is noisy, but good-natured, and will lend a dollar (if he has it) to his companion to-day, with a cheerful alacrity, second only to that with which he will borrow the same amount of somebody else to-morrow.

Such is the medical student, or, rather, such he has been, for the process of evolution has brought him out from some of the disadvantages under which he labored. Within the last decade he has become less of a social pariah.

About fifty-five per cent. of the students at the Harvard School are now furnished by the cities; while probably an additional twenty per cent. are from the suburbs and the large towns. Yet, what is more important in becoming a cosmopolitan, the medical student is not losing his former habits of industry. On the contrary, his work is rendered more effective by the fact that yearly he brings to it a greater degree of previous intellectual discipline. We have thought it worth while to bring before our readers a few facts gleaned from the later catalogues of the University, showing the proportion of college-bred men in the medical school in the last five years and comparing them with those in the other professional schools. Fifty years ago the proportion of baccalaurei among medical graduates was rather more than half, but it fell during the subsequent increase in the attendance at the school to sixteen and two thirds per cent. (seven out of forty-two) in 1860; twenty per cent. (fourteen out of sixty-nine) in 1865; and the same in 1870. Since the reorganization of the school was fairly established it has again been on the rise, as will be shown by the following table, where "baccalaurei" means the possessors of the degree of A. B., S. B., or their equivalent.

TABLE SHOWING THE PROPORTION OF COLLEGE-BRED MEN IN THE PROFESSIONAL SCHOOLS OF HARVARD UNIVERSITY FOR THE LAST FIVE YEARS.

Years.	Medicine.			Law.			Divinity.		
	Baccalaurei.	Total Students.	Ratio per cent.	Baccalaurei.	Total Students.	Ratio per cent.	Baccalaurei.	Total Students.	Radio per cent.
1877–78	88	205	42.94	108	176	61.4	13	21	61.9
1878–79	95	227	41.85	106	153	69.3	17	23	74
1879–80	116	246	47.15	114	165	69	15	23	65
1880–81	113	234	48.37	108	156	69	13	23	56
1881–82	118	233	50.65	97	151	64	10	25	40

This gives an average per cent. in the last five years of Baccalaurei in the Medical School of forty-six and one fifth; in the Divinity School of fifty-nine and one fifth; and in the Law School of sixty-four and two fifths. Resident graduates have been omitted from the totals in all cases, as of course they possess a degree. If they were admitted it would raise the proportion of the Medical School more than of either of the others, there having been during the five years thirty-eight resident graduates in the Medical, twenty in the Law, and four in the Divinity, School. While the physicians are still at a disadvantage regarding previous liberal education compared with the legal profession, this improvement of nearly nine per cent. in five years is encouraging.

An esteemed contemporary in an editorial article, some months since, called attention to this point with reference to the comparative ratio of college-bred physicians in different parts of the country. It says: "In the Harvard Medical School it is nearly fifty per cent. In the Kentucky Schools it is zero. Among Missouri's seven hundred graduates two had received a classical education. New York's per cent. is about seventeen; that of Illinois sixteen; that of Pennsylvania eight, and that of Ohio six, these being only approximate figures."

Dr. Tyson has recently written a letter to show that these figures, so far as Pennsylvania and New York are concerned, are fallacious, for the reason that some of the medical schools had declined to make return of the previous education of their students, and had therefore in the totals been wrongly credited with no baccalaurei at all. He quotes as among these recusants Bellevue Hospital, and all the institutions in his own State except the University of Pennsylvania. It is to be feared, however, that these schools which made no return upon this point did not have a record to be proud of. Dr. Tyson says that the ratio of baccalaurei in the University of Pennsylvania was twenty-two per cent.

The figures of the entering class at Harvard are not at hand, but it is safe to say that the medical student of the future is coming to his work with a better antecedent mental furnishing than some of his predecessors have had. In these days of high requirements and sharp competition he certainly needs it.

◆

IMMIGRANT INSPECTION SERVICE.

THE reports of the immigrant inspection service in the Illinois district during the summer months show at once the carelessness prevailing upon many of the trans-Atlantic steamships in regard to vaccination, the necessity for the support of such a service, and some of the good results actually realized from its establishment. The State Board of Health proposes to carry on the work which the National Board was compelled to relinquish.

During the months of June and July the Supervising Inspector, Dr. Rauch, reports that aggregates of 27,000 and 21,000 immigrants were inspected by the assistant inspectors, who found about sixteen per cent. of these unprotected, liable to contract small-pox and to propagate the disease. During August 16,014 inspections were made, and 3125 vaccinations performed upon immigrants found to be imperfectly or not at all protected by previous vaccination or attack of small-pox, a ratio of twenty per cent. instead of sixteen as during the two previous months. Notwithstanding this increase in the ratio of vaccinations to inspections a continued marked improvement is reported as observable in the character of the protective work done on shipboard, a much larger proportion of recent vaccinations being met with as the result of the greater care and vigilance on the part of steamship surgeons generally. The previous neglect seems to have been most marked on the part of surgeons of steamships arriving at the port of Baltimore, although abundant negligence is reported concerning the vaccination of immigrants arriving by steamer at other ports. The increased proportion of vaccinations is accounted for by the increased facility with which inspections are made as the result of increased familiarity with the work, and the smaller number of arrivals, by which inspectors have been enabled to devote more time to each individual.

The inspector's observations during the months of June, July, and August show that of the arrivals in the Illinois district during that time —

"Fifty-four out of every one hundred immigrants were protected against small-pox before landing in this country, in one of the three following methods: —

"Three out of every one hundred by a previous attack of small-pox.

"Forty-three out of every one hundred by a mature successful vaccination.

"Eight out of every one hundred by a recent successful vaccination or revaccination performed on shipboard.

"Taking the whole season throughout only twenty-two out of every one hundred steerage passengers have been vaccinated on shipboard, but this number is nearly doubled for the latter part of August, when it rose to forty-one in every one hundred. Of the vaccinations by the steamship surgeons, 36.7 per cent. are now successful, but there are still nearly two thirds failures in the aggregate.

"Less than four per cent of the arrivals in Chicago are found to have been vaccinated at all eastern points, exclusive of Port Huron; at this latter station nearly thirty-six per cent. of those destined for Illinois and westward are vaccinated."

The report gives the following figures, showing a rapid decline in the number of reported cases of small-pox in Chicago since the establishment of the inspection service: —

Month.	Cases Reported	Deaths.	Remarks.
April...	321	95	Inspection began June 1st.
May....	261	65	Average decline before inspection, twelve per cent.
June...	154	29	
July....	44	11	Average decline since inspection, seventy-eight per cent.
August.	24	5	

Exactly what relative part the inspection played in accentuating a diminution of a disease usually less active during warm weather it might be difficult to determine, but it is certain that this must have been considerable, and that local vigilance and thoroughness in vaccination avail but little whilst fresh poison and fresh unprotected material for its action are constantly imported from without.

◆

THE BOSTON MEDICAL BENEVOLENT SOCIETY.

TWENTY-FIVE years ago a number of medical men, who had for some time been associated together in a literary club, conceived the idea of forming a Society for the purpose of extending aid to the widows and children of members of the profession whose death or permanent invalidism has left their families without means of support. It was not intended that this organization should be formed for the purpose of mutual aid, but simply to dispense its charities in any part of this Commonwealth where there might be need of it.

The fund which was at that time started has been steadily augmented by gifts and bequests of the more prosperous members of the profession, so that it now exceeds the sum of twenty-five thousand dollars, and a considerable number of families are the recipients of pecuniary aid from the Society. The good work has been carried on so quietly that we fear in many portions of the State physicians are not aware of the existence of a body which should arouse their interest and sympathy. It is proposed, on the 27th of this month, to celebrate the anniversary of the Society by a dinner, to which prominent citizens, including members of the profession from different portions of the State, will be invited. The occasion will furnish an opportunity to the public to become acquainted with the good work done by the Society during the last quarter of a century. The story of the man of hard work and no pay will be told again, and, we doubt not, illustrated by many pathetic instances, but it will be a satisfaction to feel that in these cases at least the cloud has had its silver lining.

We commend the labors of this Society to the members of our profession, and trust that they will give it in the future substantial support, for none appreciate as fully as they the suffering and hardships which men of our calling are exposed to.

MEDICAL NOTES.

— The death is announced of the oldest physician on Staten Island, Dr. William C. Anderson, of Kingston. He was formerly Quarantine Commissioner, and for twenty years was editor and proprietor of the *Richmond County Gazette.*

— The American Public Health Association meets in Indianapolis October 17th to 20th inclusive.

— Dr. William Pierson, of Orange, New Jersey, died on the 1st of October, in the eighty-seventh year of his age. He was a descendant of the Rev. Abraham Pierson, who came from Brantford, Conn., to settle in Newark in 1666, and his father was a member of Congress during the administrations of John Quincy Adams and General Jackson. For thirty years he was secretary of the New Jersey State Medical Society, and in 1869 was elected its president. He also held many public positions of trust and honor during his long and active career.

— The daily papers report the death of a workman in New York, in the employ of the Brush Electric Light Company, from a shock received while he was adjusting a line. He was at work at the top of a pole making a new connection for the wire. When he received the shock he did not fall, but hung, his foot being caught in the wire. He was taken down, but died shortly after being carried to the station house. The skin on the palms of both hands was hanging in strips, as though it had been seared off with a hot iron, and the man's face in death bore a look of intense agony.

NEW YORK.

— The regular winter course of lectures began on Monday evening, October 2d, at the College of Physicians and Surgeons and at the University Medical College. At the former Dr. T. Mitchell Prudden, director of the physiological and pathological laboratory of the Alumni Association, made an address on Cell Life and Animal Life, and Prof. John G. Curtis, secretary of the faculty, gave a history of the origin and progress of the school. At the University the introductory address was delivered by Prof. Wm. H. Thomson. The session commenced at Bellevue Hospital Medical College on the 20th of September, and the reading and recitation term at the Long Island College Hospital, Brooklyn, on September 27th. The regular term at the latter institution does not begin until the 24th of January.

— A juror who was summoned at the Superior Court lately was very promptly excused from duty when he announced to the judge that he was sick with small-pox. He said he came himself because the summons required that he should appear in person.

— The first meeting of the County Medical Society since the summer recess was held on the 25th of September, when Dr. W. F. Mittendorf read a paper on Myopia and the Necessity of its Correction by Glasses. The nomination of officers, including delegates to the State Medical Society to serve for four years, also took place at this meeting. At the first meeting of the Medico-Legal Society, which was held September 27th, there was, unfortunately, some disagreement arising out of the alleged illegal election of the president, as well as certain other unpleasant matters, but it is to be hoped that all differences will soon be arranged in such a manner that the regular work of the Society need no longer be interrupted.

— The recent sad accident in the Harlem tunnel has attracted much attention to the bad sanitary condition of that work, as well as many other abuses that have hitherto existed in connection with it, and Mr. T. D. Martin, a passenger on one of the trains wrecked in the tunnel, has made a formal complaint to the Board of Health against the New York Central and Hudson River Railroad Company for maintaining a public nuisance, namely, "the two side tunnels of the depressed portion of their line between Fifty-Ninth and Ninety-Eighth Streets." In it he speaks of the utter helplessness of passengers on trains running through these tunnels in case of an accident, and the impossibility of outside help reaching them in time to be of benefit, especially in winter, when red-hot stoves are in the cars. No less than two hundred and sixteen trains pass through this underground section every week day, and in case of a blockade in the middle tunnel, all trains have to pass through these side tunnels, which are pervaded by midnight darkness throughout their entire length. He then continues as follows: "In addition to this, riding through these side tunnels is positively unhealthy from the fact that there is practically no ventilation whatever in them, and as the locomotives of the Harlem road burn a cheap bituminous coal, if the windows of the cars are open one gets a dose of coal gas, smoke, and cinders that is suffocating, while if the windows are shut he smothers from lack of air. In many persons the breathing of the gas and smoke produces a violent cough, and I cannot believe that for one to ride through this veritable 'Black Hole of Calcutta' twice a day for nearly every day in the year (as hundreds of business and working men and women have to do) is anything less than seriously detrimental to health. It is true that the ride through occupies but about six minutes, as a rule, but it is six minutes of torture, and there are not infrequently delays which prolong it to a greater period." In addition it should be stated that there is a muddy and slimy gutter on each side of these close and narrow tunnels.

Miscellany.

A CASE OF PHOSPHORUS-POISONING WHICH COULD NOT BE DIAGNOSTICATED EITHER IN THE LIVING BODY OR FROM THE MACROSCOPIC AUTOPSY.

In the *Philadelphia Medical Times* there is an interesting case of the above nature, described by Dr. Hans Hebra, of Vienna. The patient was a shoemaker's apprentice, nineteen years of age, well nourished, powerfully built, of good previous health, and living in good surroundings. For six days before coming under observation, he had noticed isolated red spots on various parts of the body, soon becoming bluish and increasing in number. These were easily recognized as hæmorrhages, and affected all parts of the body, including the conjunctivæ and mucous membranes. The urine also contained blood. The gums were slightly swollen.

The resemblance of the case to one of purpura hæmorrhagica was of course recognized, but, under the circumstances of the patient, no hypothesis could be formed of its causation. In two days a slight right facial paralysis began to be noticed, together with difficulty in pronouncing certain letters, but the mind remained clear, and locomotion and the special senses were unimpaired. The paralytic symptoms, however, rapidly increased; that night there was uneasiness, vomiting, complete aphasia, coma, and death at six A. M. of the following day.

The autopsy simply confirmed the ante-mortem diagnosis of hæmorrhages, including one in the middle of the left thalamus optimus, and towards the surface of the left parietal lobe. Besides this the capillary hæmorrhages were numerous throughout all the tissues of the body, bronchi, pericardium, myocardium, and all the mucous and serous surfaces, as well as in the muscles of the extremities. Still, no *cause* for the condition was discovered.

A microscopic examination, however, showed the pathological changes characteristic of phosphorus-poisoning. In the apoplectic region of the brain, granules of fat, and other evidences of extensive fatty metamorphoses and infiltration, were found. The same condition obtained in other parts of the brain in different degrees. The adventitia of the small arteries of the brain and the capillaries exhibited the same change. Fatty degeneration was found to obtain in the most distant portions of the body. Deposits of fat granules were found in the cells of the liver as well as in the epithelium of the urethra. In all the muscles, cut obliquely, as well in voluntary as in involuntary muscular fibre, deposits of fat granules were found.

Suicide and murder were equally improbable in the case, but investigation through the physician to the corporation of shoemakers in Vienna showed that it was the custom among the shoemakers' apprentices to put the heads of matches into the bread and beer of their fellow-workmen, in order to enjoy the grimaces of the teased ones whenever they tasted the beer or bread so disgustingly prepared. Direct inquiry at the shoemakers' showed that the patient, particularly, was in the habit of practicing the joke, and that he enjoyed exceedingly the grimaces of his comrades. Whether one of his comrades had taken revenge, or whether he himself had taken the beverage prepared for another, is impossible to say. Of course such information has for us no special interest, after the fact that such was his habit has been fully established.

The conclusion of Dr. Hebra is that the pathological, anatomical, and microscopic character of the tissues could not have been due to any other cause, and that it is almost certain that the case was one of phosphorus-poisoning, of which the history of the patient's habits leaves no doubt. The writer hopes that hereafter there may be more distinct observations of the symptoms of purpura patients, and that in every case an analysis of any vomited matter will be made.

◆

LETTER FROM BANGOR.

Bangor, *September* 30, 1882.

Mr. Editor, — My attention has been called to an article in the Journal from your Portland correspondent of the 17th ult., attributing "the widespread impression that the last meeting of the Maine Medical Association was not a success to the fact that for some years past certain members have persistently endeavored to drag their personal quarrels into the public meetings of the Association, and have succeeded in wasting a great deal of valuable time of the Society. This year an effort to stir up strife met with a cold reception."

I cannot agree with your correspondent. The constitution was amended in 1873, when plenary power was invested in a board of five censors, three of whom constituted a quorum, to sit as a board of trial and to arraign, try, and expel members for any breach of the eleven articles and fifty sections of the general code of medical ethics. There was no direct appeal from their decisions to the Association. This amendment was made under the plea that the Association could not afford to waste its valuable time in correcting the faults and complaints of its members.

The new system has been tried and failed, as more complaints have been made to the society, more strife stirred up, more bitterness engendered, and more time wasted in undoing and overriding the autocratic acts of the censors during the past nine years than since the incorporation of the Association in 1855.

Besides the disciplinary and expelling power the censors have arrogated the right to judge of the fitness and qualifications of candidates for admission, and claimed that confidential communications upon the character and reputation of candidates were privileged, in utter violation of the provisions of the charter. The Association is kept in ignorance of the details of the trials and investigations, the results only being reported to it, thereby completely subverting the social and democratic principles of the original constitution, which made a two-thirds vote requisite for admission and expulsion.

To correct these evils an amendment was introduced at the last annual meeting to subject the acts of the censors to the scrutiny and approval of the Association. When this amendment comes up in regular order at our next annual meeting we shall see whether it "receives a cold reception."

No attempt was made to drag in personal quarrels. It was shown that the Maine General Hospital and the Medical School of Maine had been fostered upon the Association, and the prevailing impression existed in the profession that its material posperity had suffered from the undue exertion and inordinate ambition of the staff and faculty of these institutions to draw the paying business away from its legitimate centres. Fair competition is proper and healthy; but when State and private contributions are used to gain experience and attract paying patients to charitable institutions, which in turn, through their representatives on the board of censors of the State Association, attempt to repress manly exposure and resistance to such tendencies, it becomes time "to stir up strife."

The general hospital was built by private donations. Many members of the Association who lived too far from Portland to enjoy its benefits contributed liberally. The State is called upon for an annual stipend of five thousand dollars to defray the current expenses of *treating the poor in hospital.* The physicians and surgeons of other parts of the State can't look on with indifference and see, through hospital prestige, printed circulars, and reports, their paying cases drawn off to Portland, and the poor left on their hands, while members, whose skill and reputation happen to attract public attention and notice in the papers, are liable to be summoned before the censors at Portland to be tried for "permitting their cases and operations to be published in the daily prints." Better by far that the State should distribute the five thousand dollars among the needy sick and their medical attendants than to have it used to treat those who are amply able to be treated at home, by which the local surgeons are robbed of the fruits of their study and experience, and subjected to indignities.

The Medical School of Maine accepted a grant of timber land from the State in 1858 or 1859, upon the condition "that said institution will receive and graduate all students who pass the required examinations, without reference to where such students may have studied previously to asking admission, or what mode of practice such students intend to pursue," etc. This was accepted in utter violation of the constitution and ethics of the Maine Medical Association, and yet members of this faculty act with our board of censors in rejecting candidates and arraigning members on the most fanciful breach of medical ethics, or condone the faults of the contributors to the cabinets and museum of the Medical School, which indiscriminately competes for the surgery of the State *free of charge* during lecture season to supply clinical material, so scarce in small villages.

This growing discontent is no fancy sketch, and calls for a restoration of the Association to the avowed objects of the constitution, that of "mutual professional improvement, the cultivation of friendly intercourse, and the promotion of medical science," as a voluntary association of a learned profession will not tolerate the restraint of military or ecclesiastical discipline, or have the rules of professional etiquette made compulsory.

Very truly yours, EUGENE F. SANGER.

SUSCEPTIBILITY TO ALCOHOL AS MODIFIED BY INFECTION.

M. MOLLIÈRE, of the Hôtel Dieu at Lyons, is quoted from the *Gazette des Hôpitaux* in the *Journal de Médecine de Paris* regarding the therapeutic effects of alcohol pushed to the extent of intoxication in persons suffering from septic conditions of the blood. The clinical case upon which the remarks are based is that of a man who fell from a height, sustaining a comminuted fracture of the lower extremity, with projection of the fragments and opening of the tibio-tarsal articulation. The wound was at first treated with charpie and without antiseptics, but the next day was washed out with carbolic, put up under the spray with Lister dressings, and placed on a plaster splint. The temperature, however, went up to 104.4° F., and there was great swelling of the limb, with livid spots about the seat of fracture, a wine-colored tinge about the edges of the wound, and a gangrenous spot on the foot. Notwithstanding that no emphysema could be detected the surgeon was in doubt whether he had to do with an emphysematous gangrene due to the extensive crushing, or with the milder sloughing caused by inflammatory engorgement. The treatment, apart from the vigorous local use of permanganate of potash and the actual cautery, was alcohol administered to the extent of causing inebriety. Four hundred cc. of rum and five hundred cc. of Spanish wine produced complete intoxication, which was followed by a fall of temperature and subsequent amelioration of symptoms. The writer believes this to be not only a therapeutic but a diagnostic and prognostic point, inasmuch as the septic blood conditions, with the apparent exception of pyæmia, exempt patients from the intoxicating effects of alcohol. In this case, finding the patient drunk at night, the surgeon said that he had not emphysematous gangrene, and would undoubtedly recover. He concludes by saying that apart from this condition he has noticed the same immunity from the cerebral effects of alcohol in malignant pustule, in acute glanders, and in children with blood-poisoning from diphtheria.

THE ACTION OF SALT ON TRICHINÆ.

THE *Sanitary Record* reports the result of experiments of M. Fourment, presented to the French Academy, respecting the action of salt on trichinæ. It had been claimed by other chemists that the process of salting through which the ham was passed effectually destroyed these parasites, but these last experiments show conclusively that the salting of meats cannot be regarded as a safeguard against trichinosis. M. Fourment took a piece of meat on the 19th of April, 1881, from some American salted meats examined at the Havre docks and found infested. This meat was placed in a flask, and embedded in fine salt. It was then hermetically sealed, and not opened till the 1st of April, 1882. By this time the meat had undergone a year's salting carried to the highest degree, and if we add the time that must have elapsed since it was first put in salt in America (which could not be put at less than three months), the meat may be said to have been in salt for at least fifteen months. The meat was then cut up into small pieces, and these were placed in water, which was frequently changed to remove the salt, and remained for several hours in a temperature of 71.6° F. On the 4th, 5th, and 6th of April this was fed to a mouse, which died on the 7th, after presenting symptoms of diarrhœa. The intestine was evidently inflamed, and contained sexually developed trichinæ. A second and a third mouse were fed with more of the meat, and with exactly similar results in each case.

The discrepancy between the results of M. Fourment's experiments and those of other observers is to be accounted for by a recollection of the natural history of the trichinæ. When these parasites penetrate the muscles they are perfectly free, and have no covering whatever to protect them, and a month or more elapses before they accept the situation and coil themselves up, to quietly await their chance of being eaten up by some other animal, which must occur before they can possibly develop into the perfect adult condition. But it is only at the end of three months that a fibrous cyst begins to form around them, and it is, perhaps, a year before the covering is sufficiently dense and impermeable to entirely protect it from the action of salt. Thus it is seen that at one stage in the life of the trichinæ salt may effectually destroy them, while at another stage it would be almost powerless to act.

It seems certain that the only protection against these parasites is in thorough cooking, or possibly freezing, the meat. If the latter means is relied upon a very low temperature, 40° C., must be secured.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 30, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	547	228	26.21	9.65	13.84	2.37	4.00
Philadelphia	846,984	348	128	16.07	2.01	—	4.02	11.19
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	234	130	38.43	7.69	19.22	8.11	7.69
Boston	362,535	180	81	29.44	7.22	18.33	6.11	4.44
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	158	65	36.00	3.17	6.33	3.17	15.82
Cincinnati	255,708	90	38	20.00	3.33	7.77	—	1.11
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	67	30	28.06	5.81	5.81	8.86	8.86
Buffalo	155,137	100	53	48.00	1.00	18.00	2.00	7.00
Milwaukee	115,578	62	41	33.87	8.65	19.35	—	11.29
Providence	104,857	38	14	39.45	2.63	26.31	10.52	2.63
New Haven	62,882	28	7	17.85	7.14	7.14	3.57	3.57
Charleston	49,999	37	18	5.41	8.12	5.41	—	—
Nashville	43,461	14	7	28.56	7.14	21.42	—	—
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	16	6	18.75	—	6.25	—	6.25
Cambridge	52,740	21	9	33.33	4.76	19.04	—	9.52
Fall River	49,006	27	13	40.73	—	24.92	—	—
Lawrence	39,178	20	8	10.00	—	—	—	10.00
Lynn	38,284	8	2	12.50	12.50	—	12.50	—
Springfield	33,340	9	2	44.44	—	11.11	11.11	11.11
Salem	27,598	7	1	—	—	—	—	—
New Bedford	26,875	18	6	16.66	—	11.11	5.55	—
Somerville	24,985	7	2	42.84	—	—	14.28	14.28
Holyoke	21,851	14	—	42.85	—	21.42	7.14	14.28
Chelsea	21,785	6	1	16.66	—	—	—	16.66
Taunton	21,213	9	1	22.22	11.11	—	22.22	—
Gloucester	19,329	10	3	—	—	—	—	—
Haverhill	18,475	6	0	33.33	—	16.66	16.66	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	8	6	25.00	—	25.00	—	—
Newburyport	13,537	6	0	33.33	—	33.33	—	—
Fitchburg	12,405	5	0	—	—	—	—	—
Malden	12,017	4	3	25.00	—	—	25.00	—
Fifteen Massachusetts towns	114,307	30	13	33.33	—	20.00	3.33	3.33

Deaths reported 2134 (no reports from Brooklyn, St. Louis, New Orleans, and District of Columbia): under five years of age 916: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 592, consumption 293, lung diseases 119, diarrhœal diseases 251, diphtheria and croup 146, typhoid fever 84, scarlet fever 25, cerebro-spinal meningitis 22, whooping-cough 22, malarial fever 19, small-pox 13, puerperal fever five, erysipelas four, typhus fever one. From *scarlet fever*, Buffalo 12, Cincinnati seven, New York two, Baltimore, Pittsburg, New Haven, and Worcester one each. From *cerebro-spinal meningitis*, New York eight, Buffalo four, Fall River three, Chicago, Baltimore, Pittsburg, Milwaukee, Nashville, Somerville, and Woburn one each. From *whooping-cough*, New York eight, Chicago and Buffalo four each, Philadelphia, Baltimore, Cincinnati, Pittsburg, Milwaukee and Springfield one each. From *malarial fevers*, New York 12, Baltimore four, Chicago, Boston, and Buffalo one each. From *small-pox*, Baltimore 10, Philadelphia, Chicago, and Cincinnati one each. From *puerperal fever*, Chicago, Cambridge, Fall River, Springfield, and Brookline one each. From *erysipelas*, New York two, Philadelphia and Cincinnati one each. From *typhus fever*, New York one.

Sixty-two cases of small-pox were reported in Baltimore, Cincinnati three, Buffalo and Lawrence one each; typhoid fever 67, diphtheria 18, scarlet fever six, in Boston; scarlet fever 13, and diphtheria nine, in Milwaukee.

In 34 cities and towns of Massachusetts, with a population of 981,363 (population of the State 1,783,086), the total death-rate for the week was 21.17 against 23.64 and 22.46, for the previous two weeks.

For the week ending September 9th, in 167 German cities and towns, with an estimated population of 8,354,764, the death-rate was 24. Deaths reported 3854: under five years of age 2082; consumption 433, diarrhœal diseases 304, lung diseases 242, diphtheria and croup 148, scarlet fever 93, whooping-cough 68, typhoid fever 59, puerperal fever 27, measles and rötheln 19, small-pox (Breslau and Koblenz one each) two, typhus fever (Breslau one) one. The death-rates ranged from 13.9 in Bremen to 42.6 in Posen; Königsberg 35.1; Breslau 32.1; Munich 25.8; Dresden 23.8; Berlin 24; Leipzig 22; Hamburg 20; Cologne 25.9; Frankfort a. M. 19.3; Metz 25.5.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending September 16th, the death-rate was 20. Deaths reported 3249: acute diseases of the respiratory organs (London) 193, diarrhœa 323, whooping-cough 93, scarlet fever 70, fevers 67, measles 45, diphtheria 30, small-pox (London three) six. The death-rates ranged from 12.7 in Birkenhead to 38.1 in Sunderland; Brighton 16.7; London 17; Birmingham 18.8; Bradford 19.3; Newcastle-on-Tyne, 21.9; Leeds 24.9; Manchester 25.2; Liverpool 26.9; Hull 28.6. In Edinburgh 18; Glasgow 22.9; Dublin 25.8.

For the week ending September 16th, in the Swiss towns, population 494,390, there were 36 deaths from consumption, diarrhœal diseases 32, lung diseases 12, diphtheria and croup three, typhoid fever three, scarlet fever two, puerperal fever one. The death-rates were, at Geneva 8.3; Zurich 18.3; Basle 20.4; Berne 14.9.

The meteorological record for the week ending September 30th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
September, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 24	30.151	64	71	60	100	78	87	88	W	NW	NE	8	9	5	R	O	O	—	—
Mon., 25	30.256	58	61	56	81	70	86	79	N	NE	N	8	10	9	O	O	T	—	—
Tues., 26	30.199	58	62	55	88	57	65	70	NW	NE	NE	12	21	14	O	O	F	—	—
Wed., 27	30.251	53	57	49	81	57	80	73	NE	NE	N	13	20	6	F	F	C	—	—
Thurs., 28	30.226	51	55	47	93	81	80	85	NE	NE	NE	9	14	21	O	O	O	—	—
Fri., 29	30.176	53	58	49	100	81	69	83	NE	NE	N	9	15	13	R	O	R	—	—
Sat., 30	30.170	60	64	54	69	66	84	70	N	NE	NW	14	7	10	O	O	O	—	—
Means, the week.	30.204	57	71	47				78										28.25	.87

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 29, 1882, TO OCTOBER 6, 1882.

Williams, John W., major and surgeon. Now on leave of absence, to proceed to San Francisco, Cal., and report in person to the commanding general, Military Division of the Pacific, for duty in Department of the Columbia. S. O. 228, A. G. O., September 30, 1882.

Waters, William E., major and surgeon. To report in person to the commanding general, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Irwin, B. J. D., major and surgeon. On being relieved as attending surgeon, headquarters Military Division of the Missouri, to proceed to Whipple Barracks, Arizona, and report in person for duty as medical director, headquarters Department of Arizona. S. O. 228, A. G. O., September 30, 1882.

Forwood, William H., major and surgeon. Relieved from duty in Department of the Platte, and to report in person to the commanding general, Military Division of the Missouri, for duty as attending surgeon at those headquarters. S. O. 228, A. G. O., September 30, 1882.

Smith, Andrew K., major and surgeon. Relieved from duty in Department of Arizona, and on expiration of present sick leave to report by letter to the Surgeon-General. S. O. 228, A. G. O., September 30, 1882.

Burton, H. G., captain and assistant surgeon. Granted leave of absence for four months. S. O. 229, A. G. O., October 2, 1882.

Loring, Leonard Y., captain and assistant surgeon. To be relieved from duty in the Department of the Missouri, to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Turrill, Henry S., captain and assistant surgeon. To be relieved from duty in Department of the East, and to report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Moseley, E. B., captain and assistant surgeon. To report in person to the commanding general, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Skinner, John O., captain and assistant surgeon. To be relieved from duty in Department of Arizona, and to report in person to the Surgeon-General. S. O. 228, A. G. O., September 30, 1882.

Shufeldt, R. W., captain and assistant surgeon. To proceed to Jackson Barracks, New Orleans, La., and report to the commanding officer thereat for duty. S. O. 93, Department of the South, September 26, 1882.

Carter, W. F., assistant surgeon. Relieved from duty at Fort Concho, Texas, and to report to the commanding officer, Fort Stockton, Texas, for temporary duty as post surgeon. S. O. 103, Department of Texas, September 29, 1882.

Powell, J. L., assistant surgeon. Relieved from duty at Fort Stockton, Texas, and to report at headquarters, Department of Texas, for temporary duty as post surgeon, San Antonio, Texas, and attending surgeon at department headquarters. S. O. 103, Department of Texas, September 26, 1882.

Owen, William O., Jr., first lieutenant and assistant surgeon. To proceed to Fort Townsend, W. T., and report to the commanding officer for temporary duty at that post. S. O. 138, Department of the Columbia, September 22, 1882.

Boston Society for Medical Observation. — A regular meeting of the Society will be held at the Medical Library, 19 Boylston Place, on Monday, October 16, 1882, at eight o'clock P. M. Reader, Dr. J. J. Putnam. Subject, Painful Periarthritis of the Shoulder. Dr. E. H. Bradford and Dr. S. G. Webber will open the discussion. C. M. Jones, *Secretary*.

Lectures.

CLINICAL LECTURE.[1]

DELIVERED AT BELLEVUE HOSPITAL, NEW YORK.

BY AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine, and Clinical Medicine in Bellevue Hospital Medical College.

BRIGHT'S DISEASE, WITH HYPERTROPHY OF THE HEART, LEAD POISONING, GOUT, AND INTERCOSTAL NEURALGIA IN THE SAME SUBJECT.

GENTLEMEN, — The first patient whom I shall have the pleasure of presenting to you to-day may be said to be a walking pathological collection, on account of the number of different affections which are associated in his case. In the first place there are distinct evidences of chronic renal disease, the urine containing albumen and hyaline and granular casts; and from the small amount of œdema, the large quantity of urine, and the symptoms of uræmia that have been observed, we are justified in inferring that he has the granular contracted kidney.

In the second place we find that this man has hypertrophy of the heart, and as there does not seem to be any valvular disease whatever there can be but little doubt that it is connected with the affection of the kidneys.

In the next place we find that the patient is suffering from lead poisoning, and as he is a painter by occupation there is no difficulty in tracing the source of the trouble. He has, as you notice, the characteristic form of lead paralysis which is ordinarily known as wrist-drop, and with which many of you are doubtless familiar. In lead palsy there is a more or less complete paralysis of the extensor muscles of the forearm, while the flexors generally retain their normal power. Some years ago I reported a remarkable case, observed in this hospital, in which immense strength was exhibited by the wrists of a patient suffering from this affection. In confirmation of the diagnosis of lead poisoning the history of our present patient shows that he has had attacks of lead colic. The question may, perhaps, now arise, Is there any connection between the lead poisoning and the disease of the kidneys? I do not think there is any reason to suppose that there is a direct connection between the two, but it is certainly possible that there may be an indirect connection, as we shall see.

In further investigating this case we find that, in addition to his other troubles, the patient has gout. It is not very often that we have cases of this affection in the hospital; but from time to time they are met with, and those suffering from it are more apt to be addicted to the use of malt liquors rather than any others. Sometimes, however, we find it here in individuals who, as far as can be ascertained, are strictly temperate. In the present instance the seat of trouble is now the ankle, and not the great toe, where we naturally look first for the evidence of gout. It is not always easy, I would remind you, to make a diagnosis between gout and rheumatism. Of course, if the disease is well marked in its manifestations, there is no difficulty, but this is by no means always the case. Some physicians, when they are hard pushed about the matter, take refuge in the statement that the patient has "a little touch of both." It is no doubt in this way that the term "rheumatic gout" has arisen; but this is a complete misnomer, because the variety of disease which is thus sometimes characterized is an entirely distinct affection.

In this case, although the ankle is the present seat of trouble, and several of the other larger joints have been implicated, the history shows that the great toe has also been affected; and this is a point in favor of gout. In addition, we have here a certain diagnostic sign of the disease in the presence of some little white spots in the helix of the ear, which a microscopic examination has shown to consist of concretions of urate of soda. We are, therefore, fully warranted in saying that this man has gout. But notwithstanding the fact that the patient has had and is still suffering from so many troubles, it is astonishing how comparatively well he looks, and how good his condition really is. Yet he has still another affection, of which I have not spoken, but which is mentioned in the history of the case, which I will now read you.

The history is as follows: John S., a native of Germany, thirty-two years of age, and a painter by occupation. He says he has followed this trade for nearly twenty years. He was admitted to the hospital about a fortnight ago. There has been no gout in his family, and the family history is otherwise negative. He drinks a good deal of ale, but not much spirits. When asked as to the quantity of ale which he has been accustomed to drinking, he tells me three or four glasses of new ale a day. Four years ago he had a severe attack of lead colic, and nine months later a similar one, but has had none since. Some time after that he was suddenly attacked with lead palsy. He recovered from this, but the affection afterwards returned. After he recovered from the second attack he was free from the trouble until quite recently. Three years ago the left ankle became swollen and inflamed, and one year ago was similarly affected. About the same time he also had an attack of typhus fever. He has not suffered much with headache, but has had dizziness and spots before the eyes. He has also been somewhat troubled lately with dyspnœa, but this may possibly be due to the condition of the heart. When he was admitted he complained of pains in several of the joints, and especially the right great toe. The urine was of a specific gravity of 1017, and contained albumen as well as large and small hyaline and granular casts. Some days he has passed as much as one hundred and fifty ounces of urine in the twenty-four hours. Four days ago he began to be troubled with intercostal neuralgia, and this is the fifth and last affection from which he has been suffering. He is being treated mainly with tonics, with the application of electricity to the wrists, and I believe he is improving.

Now as to the possible connection between the lead poisoning and the disease of the kidneys. Garrod, who is the classic authority on gout, has shown that lead can produce this affection; and it is well known that the granular contracted kidney has a special connection with gout. To such an extent is this the case that the late Dr. Parr distinguished the contracted kidney with the title of gouty kidney. It is a fact, however, that in a large number of gouty patients there is no such disease of the kidneys, while many cases of contracted kidney occur in those in whom there is no evidence of gout.

---

[1] Specially reported for the JOURNAL.

ANEURISM OF THE THORACIC AORTA.

Our next patient was to have been presented to you on the day when I was speaking of organic murmurs of the heart; but the opportunity did not occur. I found at that time that she had an aortic double murmur, and as I listened to her heart I was particularly struck with one fact, namely, that the aortic sound was unusually intense. A more careful examination then revealed the existence of a pathological condition which had been up to that time unsuspected, and that was a dilatation of the aorta. There were two facts that militated against the probability of such a thing, the sex of the patient, female, and her age, twenty; but the physical signs were such as to leave no reasonable doubt about the matter. Aortic aneurism is much more apt to occur in the male than in the female, and is also generally found in those past middle life. In such a patient as this we would never under ordinary circumstances think of suspecting the presence of an aneurism; and this leads me to say that we shall very often overlook this affection entirely unless we are very careful in making examinations of the chests of our patients. About a year ago a gentleman consulted me on account of being a little run down and "out of sorts," and as there did not seem to be much the matter with him it did not occur to me to make any examination of his chest. I gave him a tonic, and he improved; but quite recently he came back to me, and then I concluded that it might be advisable to examine his chest. When I did so what was my surprise to find unmistakable evidences of an aortic aneurism, seated at the spot where thoracic aneurisms are most likely to be located, the junction of the ascending and transverse portions of the aorta. If I had only made the examination a year ago I should no doubt have found the same evidences at that time.

Let us next see what are the signs of aneurism in the present instance. At a certain point on the surface of the chest, along the tract of the aorta, an impulse can be readily seen, and if the hand is placed over this spot the impulse can be clearly felt. In addition, the presence of a thrill at the same point can often be distinctly made out. Pursuing our investigations further, we find that there is in one portion of the chest a circumscribed area of well-marked dullness, and that the situation of this corresponds with that of the junction of the ascending and transverse aorta. Again, on auscultation, we find that there is great intensity of the aortic sound of the heart and a well-marked double aortic murmur. Experience proves, however, that murmurs are not always present. In the case which I have just related to you there were none, and in another instance, where the other signs of aneurism were plain, the physician in consultation with whom I saw the patient expressed some doubt as to the diagnosis because no murmurs could be detected. It is well to bear this point in mind, therefore, that an aneurism can exist perfectly well without any murmur, although in the vast majority of instances this sign is present.

In the case now before us some of the concomitant signs of thoracic aneurism are lacking. Thus, we do not get any evidence that the aneurismal tumor is pressing upon a primary bronchus, the respiratory murmur being entirely normal on both sides of the chest. There is also no evidence of pressure upon the œsophagus, nor of obstruction of the superior vena cava. Neither have we any reason for supposing that it presses upon the recurrent laryngeal nerve, the sympathetic nerve, the subclavian artery on the right side, or the trachea. Such diagnostic points are, then, entirely wanting in this case, but in spite of this the direct physical signs are plain and conclusive.

While upon the subject of diagnosis it may be well for me to mention one caution, and that is in regard to mistaking a collection of pus (in empyema) situated in the tract of the aorta for an aneurism. Such a collection, in addition to many of the other signs of aneurism, will sometimes seem to present a distinct pulsation.

As soon as the presence of the aneurism was discovered the patient was placed upon the use of the iodide of potassium, which is a remedy of considerable reputation in this affection. She has now been taking it for some time, however, but without any special success up to the present time, so far as we are able to determine. Yet in several instances I have seen the most marked results from its use, not only in giving relief from troublesome symptoms, but in actually diminishing the size of the aneurismal tumor.

After taking it for some time one patient that I knew, who had previously suffered a great deal from dyspnœa, declared that he was well. He afterwards became imprudent, however, and it was found after death that a second aneurism had been formed near the seat of the original one, and that it pressed upon the trachea. In the present case the iodide is well borne, and I should recommend that it be given in increased quantity up to as high a point as the system will tolerate.

Aside from her sex the fact that this patient is only twenty years old, and yet has aneurism, is a very striking one. As soon as I ascertained that she was the subject of aneurism I said to myself that she must have had syphilis, as it is exceedingly rare to find the affection at this age except in those who have had syphilitic trouble. The patient herself denies, however, that she has ever been affected with syphilis, and there is at present very little, if any, evidence about her person of such having been the case. Still, in such a case, it seems to me to be almost positively certain that the patient has had syphilis, that if this were not the fact it would be exceedingly exceptional and remarkable. It is always well to remember that in that disease people are apt to acquire a facility in lying that is really extraordinary. Then, again, this young woman may have had syphilis, and yet not have known it. Such a thing is by no means impossible, I assure you. Some years ago I was called to see a young married lady, in the absence of her regular medical attendant, who told me that she suffered greatly from rheumatism, the pains in her limbs being especially severe at night. In making an examination I discovered what I could scarcely doubt was a syphilitic node. It would, of course, have been the height of indiscretion to charge her with having had syphilis, or to make direct inquiries into the matter, and so I asked her if she had ever suffered from female troubles, when she replied that she had had severe ulcerations about the genitals, for which she had been treated by a gynæcologist. Under the circumstances I thought it advisable to prescribe the iodide of potassium in pretty full doses, and the next time I called to see her she told me that I had given her a most remarkable remedy, which had cured her rheumatism at once, and that she had been recommending it to all her friends in the hotel where she resided. Still I could hardly venture to acquaint either her or her husband with the true state of affairs, and presently I was placed in a very embarrassing dilemma, as she was about to go abroad, and asked me for letters to some of the English physicians describing the nature of her case. It was a very delicate matter, I assure you, to convey the intelligence of the specific trouble to the medical men to whom I addressed my letters, and yet conceal it from her, as she would naturally expect to peruse them, but I did the best that I could under the circumstances. I was gratified to learn afterwards, however, that she concluded not to go abroad, and I believe she still has the letters in her possession.

PHTHISIS, BRIGHT'S DISEASE, AND THROMBOSIS OF THE FEMORAL OR ILIAC VEINS.

In regard to our last patient to-day, as was the case in the first, I may say that he presents an interesting field for pathological study on account of the variety of the affections from which he is, unfortunately, suffering. In the first place, he has considerable pulmonary trouble, there being present the physical signs of excavation and solidification in the lung. Next there is distinct evidence of renal disease. The urine has a specific gravity of 1034, and contains albumen in pretty large quantity, as well as abundant granular casts. Then he has still another affection, and it is to the latter that I wish especially to call attention. When the lower extremities are uncovered you perceive that the right limb is very much swollen as compared with the left. He has, indeed, a condition which used to be designated as phlegmasia dolens, or milk leg, from the fact that it was supposed to be connected with the function of lactation in the puerperal woman. On a further examination we find that the limb is not only greatly enlarged, but is also markedly œdematous, and there can be no doubt that we have here a case of œdema of the lower extremity, due to thrombosis of the femoral or iliac vein. The vein becomes filled with coagula, and there is great danger of fragments of larger or smaller size becoming separated and carried into the circulation. When thus transported they pass into the right cavities of the heart, and may thence be driven into the pulmonary artery, giving rise to obstruction of this vessel or its branches.

Here let me pause to say, lest I should forget it later, that in all such cases the first requisite is to keep the patient absolutely quiet, so as to avoid as far as possible the danger of disintegration of the clots, which may result in sudden death from a plugging of the pulmonary artery by a mass of fibrin. The following is a case in point. A gentleman received a severe injury about the hip from being thrown under the wheels of a cart, and this resulted in thrombosis of the femoral vein. The most absolute rest was enjoined, and the danger liable to result from movements was fully explained to him. He was self-willed, however, and insisted on having an apparatus in the bed, by which he might raise himself, against the protest of his medical attendant. The consequence was that in some of his exertions a portion of the thrombi became dislodged, and a sufficiently large mass to obstruct it was forced into the pulmonary artery, producing instant death. The enforcement of perfect quiet is, then, a very practical point in this affection. Restoration is accomplished by the gradual enlargement of the neighboring veins, by which the circulation of the part is rendered normal once more, but sometimes this does not take place, and the œdema remains indefinitely.

The history of the case is briefly as follows: George K., nineteen years of age, a native of the United States, and admitted to the hospital one month ago. He has had a slight cough for several years, but last December this became considerably worse. About the same time he noticed that his urine was often scanty and high colored, and that it sometimes occasioned a burning sensation in its passage. The right leg first became swollen, and later he had considerable general dropsy. On admission the physical signs of cavity in the right lung were found, with cough and expectoration. The heart was normal. There was general anasarca of the body, and the urine was found to contain granular casts and seventy-five per cent. of albumen. Within three weeks after his admission the œdema of the face and of the left lower extremity had almost disappeared, but the condition of the right limb has not varied much from that which you now observe.

In regard to the treatment of the latter, all that we can do is to use anodyne applications and gentle friction. The friction must be made with care, especially near the affected vein, as any rough handling of the part might cause dislodgment of some of the thrombi. It should also be applied from below upward, so as to facilitate the emptying of the veins. So far as the renal disease is concerned, it is only necessary at present that the condition of the urine should be carefully watched to see that a proper amount of urea is being excreted. As to the disease in the lungs, that requires the same treatment which would be necessary were the case simply one of phthisis without complications.

Original Articles.

INDUCTION OF PREMATURE LABOR; MANUAL DILATATION; FATAL RESULT TO BOTH CHILD AND MOTHER.[1]

BY J. P. REYNOLDS, M. D.

Mrs. Q., aged thirty-four, mother of four children. There had been two miscarriages in the early months. Nine years ago a boy of large size was born dead after a very difficult instrumental delivery. Eight years ago a male child was born with the aid of forceps, and it lived four years. Her accoucheur, a well-known and able practitioner, thought that this child owed its escape to the fact that it was born a month before term, and he advised induction of labor in the event of a subsequent pregnancy.

After the death of this boy the mother had a severe attack of diphtheria. During the years following she became an opium eater, reaching at last the dose of four grains of morphia daily. When she returned to the United States in the autumn of 1881, this habit was abandoned under the use of what is known as "Dr. Collins's" antidote. Severe local disease of the genital organs had also existed. Her general health was much impaired.

Menstruation had been very irregular for the past three years. At one time during this period amenorrhœa continued for eight months.

The dates which she was able to supply in regard to the present pregnancy were unreliable. Her husband followed her to this country in the latter part of October, 1880. She believed that her last menstruation occurred a little later, in the early days of November, and that she first perceived movement on on the fifth of April, 1881. From these data it was conjectured that her confinement would take place in the early days of August.

---

[1] Read before the Obstetrical Society of Boston, February 11, 1882.

On the 30th of April careful measurements of the pelvis, external and internal, were made by Dr. W. L. Richardson and by myself, independently, and our results were afterward compared. Much difficulty was experienced in measuring the pelvis from the amount of fat and from the very large size of the patient. No discrepancy was found in the two results as to any important diameter. The pelvis was normal, except at the antero-posterior diameter of the inlet, where we believed it to measure three and a half inches. The transverse diameter of the bony outlet was 11 centimetres = 4¼ inches, according to Dr. Richardson's estimate; 9.5 centimetres = 3⅝ inches, as I made it. The antero-posterior diameter of the outlet was not satisfactorily ascertained, but it was admitted by both observers to be ample.

Neither Dr. Richardson nor I were confident as to the entire accuracy of our estimate of the true conjugate. We were both inclined to admit that the history of the patient pointed to a somewhat larger antero-posterior diameter.

I recommended an attempt to induce labor when the pregnancy should have nearly reached eight months. I spoke with great confidence of the ease and certainty of the operation; but I warned the relatives that, with the unfortunate medical history of the patient, nothing could be certainly promised as to her subsequent convalescence; though I stated that her chance of recovery would be much improved if her pregnancy were not permitted to go on to term.

The 6th of July, at which date it was inferred that eight months would be nearly completed, was appointed for the operation. The record of that day says: That the results of palpation practiced in the hope of obtaining additional evidence as to the probable age of the child were very unsatisfactory on account of the mother's size, fatness, and the laxity of the abdominal walls. The child appeared small. The development of the uterus was between seven months and eight. The fœtal heart was heard, rather slow, in the mother's left flank. The fœtal movements were distinct. I decided to delay the operation.

Subsequent examinations during the ten days following left me still in much doubt as to the exact age of the child. The patient grew anxious; she declared that she was daily becoming much larger, and at last, on the 16th of July, I undertook the induction of labor, Dr. C. M. Green and Dr. Henry Colman, of Swampscott, being present and kindly assisting me.

The patient having been profoundly etherized, I began the introduction of my hand into the vagina at twenty minutes after eleven, but I was unable at the end of an hour in spite of persevering efforts to introduce more than one finger into the os. Dr. Green took my place, at my request, without better result. At his suggestion I then had recourse to Barnes' bags, using successively the smallest size and the next larger. At half past one the os still only admitted one finger; but soon after manual efforts were successfully renewed, and fifty minutes later, at twenty minutes past two, a living, though feeble, female child was delivered with little or no resistance. The placenta soon followed. The perinæum, which had been restored after laceration, escaped injury.

The flabby, anæmic appearance of the patient had suggested to all those who saw her the probability of hæmorrhage after delivery. Everything had been made ready for that emergency. As surgical anæsthesia had been maintained for an unexpectedly long period, I was especially glad to administer, soon after the uterus was empty, a teaspoonful of the fluid extract of ergot. No hæmorrhage whatever took place.

On coming out of the ether Mrs. Q. was very restless and excitable, and made bitter complaint of after-pain. On account of her past history it was thought best to withhold opium from her for a considerable period. Brandy was given by the mouth. It was repeatedly injected subcutaneously. She had Hoffmann's anodyne. At length a dose of the antidote to which she had been so long accustomed was given; and at last a subcutaneous injection of morphia. She, however, continued to lose strength rapidly. Once under the aid of ether inhalation, for which she begged eagerly, she rallied, but before long fell off again, and at five o'clock in the afternoon, nearly three hours after the birth of the child, died. The uterus remained throughout this period firmly contracted. The pulse during these latter hours was counted at times at 132, and it rarely fell below 112.

The child, which had the size and general appearance of a seven and half months' fœtus, moaned constantly; deep purple stains persisted over extensive regions of its body; it died at half past ten in the evening.

We have learned to associate only the happiest results with the induction of premature labor. That operation finds its place among the most merciful procedures of our art, and is justly regarded as promising in the highest degree safety for both mother and child. Members of the Society know the record of remarkable success which has attended manual dilatation for this purpose at the hands of several of our colleagues during the past eight years, and they remember the strong conviction of the superiority of this method of inducing labor in comparison with all other plans which has been here expressed. I much regret that a method of operating so full of promise should have been necessarily tried under conditions so unfavorable to success.

In this instance the death of the mother was undoubtedly due to the constitutional effect of severe labor upon her nervous system, to what is technically known in obstetrics as "shock." How far the previous habits of the mother rendered such a result inevitable must be matter of question. When, as a last resort, it was decided to give her an injection of morphia, it was pitiable to hear her despairing cry: "Morphia, nothing but a poisonous dose will do any good to me."

The important inquiry remains: Was the danger in this case or any part of it fairly chargeable to the method adopted? While I believe that all due gentleness and patience was used, I cannot deny that the length of the process and its apparent character, as a violent interference with nature, must have made it seem to lay witnesses responsible for the untoward and alarming result. I am glad to lessen the pain of this recital by reporting at the same time another instance of this operation to be added to the many already familiar to the Society, in which the success of the attempt was most conspicuous.

I was called last spring to see in consultation the wife of a physician in the neighborhood of Boston, attacked with eclampsia in her first pregnancy. Her husband's careful watching had not detected any previous threatening of danger. The urine had been abundant in quantity. There had been no preceding albuminuria. She had slept well. The pregnancy was eight months advanced.

The first convulsion had occurred at six in the morning. When I saw her at seven in the evening there had been nine convulsions, the latest at half past four o'clock. Under excellent consulting advice the patient had been bled to sixteen ounces. Ether, which had first been employed, had been laid aside, and chloroform substituted; the induction of labor was strongly disapproved. Subsequently chloral, ninety grains in all, with bromide of potassa, had been given by rectum. No evidence of labor was present. The os was wholly closed. The child was in right position; its head at inlet of pelvis. The fœtal heart was heard in the right flank; the placental souffle on the left side. The urine, under heat, was two thirds coagulated. Since the second convulsion there had been no return of intelligence. The bowels had been freely emptied by enema. But very little urine was found in the bladder on introducing the catheter.

Chloroform was suspended, and after a moderate interval ether was given to complete anæsthesia. The introduction of the whole hand into the vagina required twenty minutes. At twenty minutes of eight I began to dilate the os. At eight o'clock a living female child was extracted. The placenta followed promptly. There was a moderate perinæal tear, for which two deep stitches were taken.

I directed that ether be continued without intermission for many hours under medical supervision; that it be pushed to full anæsthesia on the slightest threatening of convulsive movement.

No convulsion came. Ether was given till twenty minutes of eight in the evening following. Half an hour after that time the patient recognized her husband. Mother and child did well.

◆

ON THE COLLECTION OF DATA AT AUTOPSIES.[1]

BY HENRY P. BOWDITCH, M. D.

The committee appointed to consider a plan for securing uniformity in the data of autopsies respectfully present the following blank form to be filled by the examiner making the autopsy, together with detailed instructions for making the required measurements.

As the object of collecting data of this sort is to determine the normal standard of size for the various organs at different ages, as well as the variations from this standard which are associated with different diseases or tendencies to disease, it is important to neglect no opportunity of securing a complete set of measurements, whatever may be the age, sex, or manner of death of the individual.

As an example of the kind of problems to be solved by investigations of this sort, attention is called to the results of Professor Beneke's observations, to which allusion has already been made in volume i., page 140, of the Transactions of this Society. These conclusions are here reproduced in a corrected and modified form in accordance with the request of Professor Beneke, expressed in a letter to one of the committee.

(1.) Before the period of puberty the aorta is *smaller* than the pulmonary artery, after this period the relation begins to be reversed, and in advanced life the aorta is always *larger* than the pulmonary artery.

(2.) The aorta and pulmonary artery are absolutely smaller in the female than in the male, but relatively to the length of the body there is scarcely any difference between the circumference of the arteries in the two sexes, while the heart in females is absolutely as well as relatively a little smaller than in males.

(3.) In adult males the volume of the lungs is greater than that of the liver; in adult females the reverse seems to be true.

(4.) In men the volume of the two kidneys is nearly equal to that of the heart; in children it is greater.

(5.) Children have a relatively larger intestinal canal than adults.

(6.) A sudden increase in the size of the heart occurs at the period of puberty.

(7.) The iliac arteries diminish in size during the first three months of life.

(8.) The cancerous diathesis is, in the majority of cases, associated with a large and powerful heart and capacious arteries, but a relatively small pulmonary artery, small lungs, well-developed bones and muscles, and tolerably abundant adipose tissue.

(9.) Pulmonary tuberculosis is often associated with an unusually small heart.

(10.) In constitutional rachitis the heart is generally large and well developed; the arteries are also large.

The data to be collected by this Society will be of great use in confirming or correcting these and similar conclusions.

H. P. Bowditch.
F. A. Harris.

RECORD OF AUTOPSY.

(1) Age ....years....months. (2.) Sex ....
(3) Cause of death ....
(4.) Height of body ......cm. (5.) Weight of body ...... kilo.
(6.) Heart, weight ....grammes; volume ....cc.
(7.) Lungs, weight ....grammes; volume ....cc.
(8.) Liver, weight ....grammes; volume ....cc.
(9.) Spleen, weight ....grammes; volume ....cc.
(10.) Kidneys, weight .....grammes; volume ....cc.
(11.) Testicles, weight .....grammes; volume ....cc.
(12.) Uterus, weight ......grammes; volume ....cc.
(13.) Ovaries, weight ......grammes; volume ....cc.
(14.) Brain, weight ....grammes; volume ....cc.
(15.) Stomach, weight .....grammes.
(16.) Small intestine, length.....cm.
(17.) Large intestine, length.....cm.
(18.) Circumference of ascending aorta .... mm.
(19.) Circumference of pulmonary artery .... mm.
(20.) Circumference of thoracic aorta. .... mm.
(21.) Circumference of abdominal aorta .... mm.
(22.) Time between death and autopsy .... hours.
(23.) Rigor mortis ....

A description of the organs, if in any way abnormal, should be given on the opposite side of this sheet, the paragraphs of the description being numbered to correspond to the record.

Signature of Examiner ....

INSTRUCTIONS FOR MAKING MEASUREMENTS.

The measurements required in this record call for special explanation only so far as they relate to the determination of the volume of organs and the circumference of arteries.

The volume of an organ is most simply determined by immersing it in a vessel previously filled to the brim with water, and measuring the amount of water which is thus caused to flow over the edge. The sort of vessel most convenient for this purpose will vary with the size of the organ under investigation. For large organs like the liver a large stone jar or a water pail set in a large basin or tin pan will be found convenient. For smaller organs, such as the testicles, a cup and saucer may be used. It is desirable to use a vessel which has one point of its brim lower than the rest, so that the overflow may always take place from that point. If such a vessel cannot be conveniently procured, the same result may be accomplished by placing the vessel in a slightly inclined position. Vessels made for the purpose may be obtained from C. Gerhardt, in Bonn. The volume of the water displaced by the organ can be measured by pouring it from the vessel into which it overflows into a graduated cylinder. Such cylinders, from ten to one thousand centimetres' capacity, may be obtained from the Metric Bureau, at prices varying from fifty cents to three dollars.

---

[1] A report presented to the Massachusetts Medico-Legal Society, February 1, 1882.

In the case of organs which float in water (for example, the lungs) a weight must be attached to effect their complete immersion, and the proper allowance made for the volume of the weight.

The circumference of arteries is measured by opening them along one side, spreading them out flat, and applying a millimetre scale to their inner surface.

The following precautions are to be observed in taking the measurements and in making up the record of the autopsy. The numbers correspond to those of the record.

(1.) The age should be recorded in years and months in the case of children less than two years old. For older children and for adults it is sufficient to record the age at the last birthday. When the age is estimated, and not accurately known, the fact should be stated in the record.

(4.) The height of the body is best measured by placing boxes or other square-cornered objects against the head and feet of the body as it rests horizontally upon the floor or table, marking the position of the boxes upon the surface on which they rest, and measuring the distance between the marks thus obtained.

(5.) The weight of the body of an adult may be readily determined on small grocer's scales by placing it upon a board laid across the platform. The weight of the board must of course be deducted.

(6.) The heart is prepared for measurement by opening all its cavities and removing the clots, by cutting off the aorta and pulmonary artery on a line with the upper border of the semilunar valves, by cutting off the veins at their junction with the auricles, and by removing adherent portions of pericardium. In measuring the volume of the heart by immersing it in water, care should be taken to prevent air bubbles from being entangled by the valves and trabeculæ. If an unusual amount of fat is adherent to the muscular substance of the heart the fact should be stated in the record.

(7.) The lungs are prepared by removing the bronchial glands and adherent portions of pleural membrane, and by cutting off the blood-vessels and bronchial tubes as near as possible to the hilus. A weight of 0.5 to 1 kilogramme to insure the immersion of the lungs may be best attached by means of a large, sharp hook, on which the lungs can be impaled. It is particularly important in the case of the lungs to give a full account of any pathological changes that may be noticed, such as œdema, engorgement, etc., otherwise the determination of the volume and weight has little value.

(8.) The liver is prepared by removing adherent portions of the diaphragm and vena cava, as well as the ligaments and the gall bladder. The vessels are to be cut off close to the hilus.

(9.) The spleen is prepared by removing from the hilus the fat, connective tissue, and blood-vessels.

(10.) The kidneys are prepared by removing the capsules, and freeing the hilus as far as possible from fat, connective tissue, and vessels.

(11.) The testicles are prepared by cutting off the cord on a level with the head of the epididymis.

(12.) The uterus is prepared by cutting off the ligaments as close as possible to the body of the organ, and removing adherent portions of the vaginal walls.

(13.) The ovaries are prepared by removing adherent portions of the peritonæum.

(14.) The brain is to be removed in the usual manner, the medulla being divided at the point of the calamus scriptorius.

(15.) The stomach is prepared by separating from the œsophagus and the intestines at the cardiac and pyloric orifices respectively, and by removing adherent portions of peritonæum and fat. The organ is to be opened along its lesser curvature, and the contents entirely removed.

(16.) The length of the small intestine is measured from the pylorus to the ileo-cœcal valve. The organ is prepared by removing the mesentery as completely as possible, and forcing a stream of water through it to remove the intestinal contents. It is then to be spread out upon a table, and its length determined. In consequence of the elasticity of the intestine an error of two per cent. is hardly to be avoided.

(17.) The length of the large intestine is measured from the origin of the appendix vermiformis to the anus. The organ is prepared in the same way as the small intestine.

The circumference of the arteries to be determined, as above described, is measured at the following points: —

(18.) Ascending aorta, one centimetre above the border of the semilunar valves.

(19.) Pulmonary artery, same as ascending aorta.

(20.) Thoracic aorta, at a point one third of the distance from the origin of the left subclavian artery to the bifurcation of the abdominal aorta.

(21.) Abdominal aorta, two centimetres above its bifurcation.

(23.) State, if possible, the duration and intensity of the rigor mortis, and whether it had entirely disappeared at the time of the autopsy.

— Dr. Frank P. Foster, of New York, has discovered that by a combination of iodoform and eucalyptus the characteristic odor of the former drug is destroyed. The mixture, which is recommended editorially in the *New York Medical Journal*, is as follows: —

℞ Pulv. iodoformi . . . . . . ℥ss.
Ol. eucalypti . . . . fʒss.
Vaselin. . . . . ℥iv.
M. Ft. unguentum.

The ointment has an odor, but it is not that of iodoform.

Hospital Practice and Clinical Memoranda.

ALCOHOLIC STIMULANTS IN THE FORMING STAGES OF DIPHTHERIA.

BY SUMNER PUTNAM, M. D., MONTPELIER, VT.

A VERY interesting article in the JOURNAL of August 3d, inst., by Dr. Keating, leads me to offer at this time the following fragmentary and immatured observations with the hope of adding to, or illustrating any important points in the treatment of zymotic diseases therein discussed.

April 25, 1881. Called to Frank C., aged seventeen years. Was in a highly febrile state. Pulse 120. Severe pain in head, limbs, and back; somewhat delirious; tonsils swollen, already showing a deposit of diphtheritic membrane; fauces dark red, and tongue thickly furred. The young man appeared to be very ill with diphtheria, and, as a severe epidemic of that disease had been prevailing in the place for several months, I prescribed the usual medicines, a diaphoretic followed by sulphate of quinine, chloride of iron, etc., with little expectation of controlling the attack.

The father of the boy before I left asked me if he might give his son whiskey freely, and told me about the use of large quantities of spirit in diphtheria in his father's family in 1863. At that time a younger brother and sister died of diphtheria; the sister, he said, craved more stimulants than they dared give her at the time.

After her death himself and a brother older regretted that they had not given her what she wanted, and agreed if they were taken with the disease that they would see that each should have what liquors he wanted.

The brother, nineteen years of age, was soon taken with chills, headache, and sore throat, and being at a neighboring village purchased a pint of liquor and drank four times of it before reaching home without feeling any effect from it. The doctor saw him that night, and considered his case severe and likely to terminate fatally, but the man continued to drink often, because he felt little or no effect from it, claiming if he had got to die he wanted to become intoxicated, so as not to realize his sufferings. His mother protested against this course, but he continued to drink about eighteen hours, or until he had taken five pints, in part acohol reduced by adding an equal quantity of water to it. At this time he began to feel comfortably stimulated, sweating profusely, the severity of the symptoms began to abate, and soon he made a good recovery, the disease being apparently broken up or aborted.

I had long been a believer in the use of stimulants in diphtheria, but had not used them much in the febrile stage. I now made up my mind after hearing the father's story to do so, and ordered the patient to have two tablespoonfuls of whiskey every hour if it did not intoxicate. At six P. M. the patient had taken three gills of good whiskey with little apparent effect, except that he perspired, complained less, and was more inclined to sleep. Morning of the 26th he appeared better, but the pulse, though less frequent, was weak and irregular, and the whiskey was continued at the rate of one ounce per hour, the patient frequently calling for it as he said it made him feel stronger and better. The throat speedily cleared, the force and progress of the disease being at once broken, but the tongue remained furred, and feeble and irregular cardiac action continued, requiring the use of stimulants and tonics for two or three weeks.

May 10th, two o'clock P. M. Called to T. C., aged fifteen years, brother of Frank C. Throat inflamed and much filled up; tonsils swollen and showing deposit, especially the right. Pulse 120; heat sharp; respiration frequent, labored, and noisy; the patient lying in a stupid, delirious state except when aroused. Prescribed one ounce of whiskey every hour, to be given with milk every second hour, and to be increased if necessary.

At nine o'clock P. M. patient seemed to have constantly grown worse, was more stupid, labored more for breath, lying with the mouth open, and tongue protruding. Pulse 130; could not be made to gargle the throat, but would swallow the whiskey on being aroused, which was now ordered to be given in ounce doses every half hour. On the 11th, twenty-six hours after beginning the whiskey, he had taken three pints and two ounces, and appeared much improved, looking up intelligently on my entrance. Respiration relieved; pulse 100 per minute. The watchers stated that the patient began to sweat profusely and improve about two o'clock A. M., and at that time there came from his body an insupportable odor which obliged them to open the doors on opposite sides of the room, and allow the air to pass through from an outside door, in order to enable them to remain near him. Is now to take one ounce of whiskey per hour, and gargle with alcohol as strong as can be borne. At evening more comfortable. Pulse 94; temperature 102° F. Whiskey continued, and sulphate of quinine and iron ordered. Strange as it may seem the patient did not show that he was at all under the influence of alcohol. It could not even be smelled about him.

May 12th. Continues to improve. Pulse 86; temperature 101° F. Membrane in thick flakes is becoming detached in places, while a good deal remains, and below the angle of jaw, upon right side, swelling and tenderness exist. Does not swallow solids. To gargle throat often with proof spirit, sol. sulphite soda, etc.

May 13th, the third day of the disease, is better in every respect. Throat cleared, less swelling and soreness. Whiskey once in two hours. May 14th. Found the patient up eating a bowl of broth and crackers.

Let me give briefly one more case to exemplify same results, which have been uniform and prompt recovery of every case treated since May, 1881, by the *immediate and free use of alcohol during the first forty-eight hours of the attack* of genuine diphtheria. At this early stage stimulants have uniformly been well borne and curative; while in cases of tonsillitis and catarrhal sore throats they have caused dizziness, intoxication, nausea, etc.

March 5, 1882. Called to Mrs. P., aged twenty. Face flushed, frequent pulse, pain in head, back, and limbs. Tonsils and fauces inflamed; large patch of membrane upon left tonsil; less upon right. A definite, inflamed, raised border has already advanced to the hard palate, and the patient seems seriously attacked.

Ordered one ounce of whiskey every hour, and to gargle every quarter hour for a while with alcohol as strong as can be borne. May 6th. Patient had used two pints of whiskey nearly, and the alcoholic gargle frequently; was more comfortable; sweating freely; the inflammation in fauces, and over hard palate, had apparently ceased, the surfaces having a shriveled look — the change being as evident as where a burning surface has been quenched by dashing water upon it. Pulse less frequent, and patient encouraged; has faithfully carried out the treatment, and presents no indications of overstimulation. The treatment was continued, and during the day quite large masses of membrane were thrown off, more than what were visible by an ordinary examination of the fauces, leaving the woman to recover speedily from a condition which, under former treatment, I had been accustomed to see result fatally, or in severe and protracted illness. Since 1858 I have met and treated more or less frequently cases of diphtheria, but have never before seen cases of the character here described *abort*, and the patient become convalescent in forty-eight hours. If the large, even toxic, quantities of alcohol used in these cases were not spent in counteracting or neutralizing the morbid action set up, why did it not continue a longer time, and why did not the alcohol manifest its physiological effects?

In the article referred to above whiskey was thought to check the progress of malignant measles as it checks the development of micrococci in culture solutions, and the malignancy of the cases described was shown to correspond with the development of micrococci in the blood of those affected. May not this explain the effects of whiskey observed in the cases here reported? I can find no writer who has brought out the point here made on the free, primary, and sole use of stimulants in the forming stage of malignant diphtheria, except E. N. Chapman, formerly Professor of Obstetrics at Long Island College Hospital, who in 1877 wrote a pamphlet on diphtheria, in which he says: "The one indication alone obtains, to wit, the introduction as promptly as practicable of a sufficient quantity of alcohol into the circulation to counteract the effects of the poison and prevent morbid changes in the blood, its full efficacy being shown at the outset of the disease when fever is high and inflammation active. The more speedy the resort to the antidote the more speedy the cure, a day or two being often sufficient to restore the patient to his health; but if the alcohol has been held in reserve until the fever is allayed, and the system prepared for stimulants, it will be shorn of its potency."

These words I now feel to be true and full of meaning, but not until the father of the boys above mentioned gave his account of the use of alcohol in diphtheria, and not until my faith in the treatment heretofore used had all but vanished, did I feel sufficient confidence to adopt a practice so unused. Now, however, I have more confidence in the free and immediate administration of alcohol for the cure of severe attacks of diphtheria than in any other means, it having been thus far successful in every case; though of course a larger number of trials must develop failures, yet I am very anxious to see the treatment thoroughly tried, believing it will oftener prove efficacious than any other, whether bacteria be a cause or a consequence of the disease.

Todd, Beale, and others have found equally large quantities of stimulants curative in other diseases where alcohol could not be supposed to act simply as an antidote for bacterial sepsis. Dr. Beale mentions cases of pneumonia and acute rheumatism, with pericarditis, apparently hopeless, in which one and a half to two ounces of brandy were given with benefit every hour, and then as much as thirty ounces a day without the slightest intoxication, vomiting, or headache, and followed by good recovery, the inflammatory products being absorbed. Here the theory of bacterial blood poisoning is not assumed, and alcohol may be supposed to act as a vascular, capillary, and nerve stimulant.

CASE OF PROTRACTED GESTATION COMPLICATED BY DEFORMED PELVIS AND ANTE-PARTUM HOUR-GLASS CONSTRICTION OF THE UTERUS. DELIVERY BY VERSION.

BY ROBERT B. DIXON, M. D.

Mrs. T., music teacher, twenty-six years old, intelligent and healthy primipara, menstruated regularly October 15th, being unwell four days, which was her usual time. She had always been regular every four weeks. November 13th she was again unwell, but for one day only. August 18th, two hundred and seventy-nine days from the date she last had any flow, she had strong uterine pains, lasting seven hours, which, however, had no apparent effect on the os. She was given a rectal injection at the beginning of the pains, and had a large dejection, but the force of the pains was not diminished in the least till several hours thereafter. She went on all right from this time till the evening of September 15th, just twenty-eight days from the day the pains formerly came on, and three hundred and seven days from the last menstrual flow. I saw the woman at eleven P. M. She said she had had no pains whatever, but one hour previously a rush of water came away, sufficient in amount to wet through the bed linen, and that a small amount had continued to dribble away since.

Upon examination I found the cervix very high posteriorly, all taken up and soft, and admitting the tip of one finger. At two A. M. pains began, four hours after the membranes ruptured, and continued regularly and forcibly, but with very little effect on the cervix. At nine A. M. sixty grains of chloral were given, and repeated again at one P. M., at which time the os was about the size of a half dollar. At four P. M., the os not having increased much more in size, ether was administered, and the woman kept deeply under its effects for ten minutes. Half past six P. M., os was about two thirds dilated. Nine P. M., os nearly dilated, pains strong, woman in good condition, but the presenting part refused to descend. The woman was then etherized, and a thorough examination made. The promontory of the sacrum was found to be very large, projecting well forward, and diminishing the conjugate diameter at the brim, about one half of an inch. The position of the child was brow anteriorly to the right side. Forceps were applied, but failed to start the head. Dr. W. L. Richardson saw the case at this time. As there was a failure from the previous attempt at using the forceps, it was considered advisable to try version. Upon introducing the hand into the uterus a strong, firm constriction at or about the internal os was found, through which the hand was slowly passed, but with considerable difficulty. The constriction was plainly visible externally through the abdomen, about one inch above the pubes, there being a depression sufficiently large and deep to admit one's hand edgewise. The principal difficulty was to get the head to ascend, which was finally successfully accomplished, and after prolonged traction the child turned out. It showed very few signs of life, but was partially resuscitated by alternate hot and cold water applications, used thoroughly for half an hour; it could, however, be made to cry out but feebly, and lived only four hours. The child was larger than the average, but not as large as many children that are born without difficulty, and I see no reason why there should have been any trouble if the complications of deformed pelvis, constricted uterus, and too early rupture of the membranes had not been present.

Its length was twenty-two and a half inches and weight nine and three fourths pounds, being from two to three inches longer and three pounds heavier than the average.

The diameters of the skull were all slightly increased, as follows: Occipito-frontal, four and three fourths inches, occipito-mental, five and three fourths, and bi-temporal, four and one fourth inches.

The case is interesting from its many complications. That the woman was ten months along there is very little doubt. The very perfect and accurate history of menstrual periods in a very intelligent primipara, always before regular regarding her menses, also the pains coming on, on the two hundred and seventy-ninth day and lasting seven hours, and labor itself coming on just twenty-eight days from that time, as well as the increased size of the child, all indicate that it was a case of prolonged gestation.

The deformity of the pelvis probably acted to some extent as a cause for the uterine constriction, as did also the early rupture of the membranes; and the fluid wedge being thereby destroyed the slow dilatation of the os is partially accounted for.

The convalescence of the woman has been perfectly normal.

Reports of Societies.

THE NEW YORK ACADEMY OF MEDICINE.

THE first meeting of the Academy after the summer recess was held on the evening of Thursday, October 5th, with the president, Dr. Fordyce Barker, in the chair. Julius Althaus, M. R. C. P., of London, was elected a corresponding Fellow of the Academy. The paper of the evening was by DR. E. G. JANEWAY, professor of diseases of the nervous system and clinical medicine in Bellevue Hospital Medical College, and was entitled

CASES BEARING ON DIAGNOSIS AND LOCALIZATION OF CEREBRAL DISEASES AND THEIR DIFFICULTIES.

The first part of the paper was devoted to pointing out the danger, under certain circumstances, of mistaking various general diseases, especially the fevers, for affections of the brain, and a number of interesting cases were cited in illustration. The head and front of diseases thus simulating brain troubles, Dr. Janeway said, was typhus fever, on account of the very marked cerebral symptoms which were apt to occur in connection with it, yet in every case where there was the slightest reason to apprehend the presence of typhus it was of the utmost importance to arrive at a correct diagnosis as soon as possible on account of the danger of the spread of contagion. He mentioned a case in which typhus was mistaken for both acute cerebritis and alcoholism, and showed how these affections, on the other hand, might easily be taken for typhus The delirium, stupor, stiffness at the back of the neck, and irregularity and slowing of the pulse often met with in the latter were equally characteristic of cerebral disease, and in a boy who was admitted to Bellevue Hospital, suffering with these symptoms, the stiffness at the back of the neck being particularly well marked, he could only arrive at a correct conclusion by investigating the antecedent history and surroundings of the patient. He then ascertained that there had been and still were cases of typhus in the house from which the boy had been removed, and this, of course, settled the question at once. In this way only was it possible to form a correct diagnosis in certain cases of typhus. This disease was also liable to be confounded with cerebro-spinal meningitis and with acute suppurative endocarditis, giving rise to embolism and the petechiæ, closely resembling those of typhus, which are apt to result therefrom. When there was definite paralysis or aphasia there was not much room for doubt, but if these were both absent, and there was beside no heart murmur, the diagnosis was often very difficult to decide upon. A case illustrating these points was then given. Typhoid fever, he said, rarely appeared under the guise of cerebral disease, as the tympanites, diarrhœa, and characteristic eruption were generally sufficiently marked to render the diagnosis comparatively easy; yet in certain cases where these symptoms were absent there was danger of confounding it with meningitis, and if in addition there was the complication of broncho-pneumonia, not infrequently met with, it might, perhaps, be supposed that there was tubercular trouble both in the lungs and the meninges.

Malarial diseases were not often taken for cerebral, but the latter were not infrequently confounded with the former. In abscess and tumor of the brain, for instance, there was apt to be hectic characterized by marked periodicity and striking elevations of temperature which closely resembled intermittent. The most severe cases of malarial trouble came from the tropics, and sometimes organic cerebral disease was found co-existent with this. Such a case he had seen in the hospital. When admitted the patient was semi-unconscious, was suffering from well-marked stiffness at the back of the neck, and had a temperature of 104° F. The next morning the latter had gone down to 99° F., but by the end of twenty-four hours it had again run up to 104° F. In three or four days the patient died, and the autopsy showed that there were present both basilar meningitis and the distinct lesions of malarial disease.

Pneumonia and pleurisy, he continued, were in numerous instances mistaken for meningitis and other cerebral disease. This was much more apt to be the case with the former, in which marked muscular soreness and stiffness at the back of the neck were sometimes met with, than with the latter. In children especially the true nature of the disease was likely to be disguised, on account of the pneumonia commencing in the centre of the lung or high up in the axillary regions. In order to prevent the mistaking of meningitis for malaria the history and order of symptoms should be taken carefully into account.

In Bright's disease, and more particularly the variety characterized by the granular contracted kidney, there was constant liability to confound the trouble with cerebral disease. A female was admitted to the hospital in an almost unconscious state, with a temperature of 104° F. Remitting convulsions followed, and later she became entirely comatose. The urine was scanty, and contained albumen and tube casts. The autopsy showed the lesions of meningitis, with evidences of chronic diffused nephritis in the kidneys. Dr. Janeway then went on to say that of all the varied cases that he had met with in practice, none had more profoundly interested him than that of a young man of sixteen, who was sent to an insane asylum on account of an attack of violent delirium, which was characterized by great profanity of language. He complained of severe pain in the muscles, and there was marked rigidity, but no evidence of paralysis. The patient died, and at the autopsy it was found that the spinal cord was normal, with the exception of a slight bloody tinge in the serum of the meninges, and that there was a clot of considerable size in the lateral ventricle of the brain, on the left side. The hæmorrhage had evidently come from a small miliary aneurism, which was found to be present. The heart showed left ventricular hypertrophy, and the kidneys were contracted. During life the diagnosis of basilar or spinal meningitis would have been warranted, yet the meninges were found to be unaffected, and instead of any such trouble here was a ventricular hæmorrhage occurring in a lad of only sixteen. When more particular inquiry was made in regard to the previous history of the patient, it was ascertained that before the attack of violent delirium mentioned he had had a convulsion. As most of the cases described had resulted fatally, he would now speak of one in which no opportunity, much to his surprise, was given for an autopsy. The patient was a male, aged twenty-two, and the first symptom of which he complained was impaired vision. A careful ophthalmoscopic examination by an oculist indicated the presence of Bright's disease, but thirty examinations of the urine failed to detect any evidence of albumen, casts, or an abnormal specific gravity. Later the sight improved, and he was able to study for and pass a difficult examination. It then grew rapidly worse, but subsequently improved again, so that he was able to pass a second difficult examination. Later he began to suffer from violent headache in the parietal region, as well as nausea. The headache was worse after sleep, and he sometimes awoke delirious. Under the remedial measures adopted the headache was relieved, but afterwards returned, and was of a very severe paroxysmal type for several weeks. There was no mental impairment until one year and nine months after the first symptoms, when he came under Dr. Janeway's observation. He was then listless and weak, could scarcely walk without support, and still complained of headache. There was no paralysis, however, and in walking he had no vertigo. An ophthalmoscopic examination showed choked disk. At the end of two months more his mind had evidently become much weaker, and the prognosis given was most unfavorable. Then, strange to say, he began to improve again. For a considerable time a tottering gait remained, but he finally recovered, with complete loss of sight, and at the end of three years was able to make his living as a telegraph operator.

Dr. Janeway next proceeded to the second part of his subject, the localization of cerebral diseases, and, after some preliminary remarks, described a case which he said was one of the best for the purpose which he had ever met with. The patient was a German, and the only words that he could say were "ja" and "nein." There was no paralysis whatever, simply aphasia and agraphia. On the left side of the head, in the parietal region, there was a deep, triangular depression, which injury he indicated by gestures was received from the premature explosion of a blast. There was no evidence of any other trouble except the aphasia and agraphia, and the seat of the injury on the cranium corresponded with the position of the posterior part of the third frontal convolution of the brain. The man was under observation for about two years, and during that period there was no improvement in his condition. Another interesting case was that of a man, forty-seven years of age, who received a blow from a billiard cue. He was knocked senseless, and when he recovered consciousness he found that he could not speak, and that when he attempted to swallow water it flowed out through his lips. When admitted to the hospital he was seen to be suffering from facial paresis of cerebral type, as well as from aphasia and agraphia. The treatment ordered consisted of quiet, blisters, laxatives, and iodide of potassium. At the end of eight days he could say almost any word that he wished, and he was discharged cured in about six weeks.

A boy was struck in the head with a stone, and not long afterwards had two falls, in each striking his head. After a time it was noticed that both the upper and lower extremities of the left side were slightly weak, and later he began to suffer from headache, vomiting, and involuntary jerking of the muscles. In about four weeks his sight became impaired, and by the end of six weeks he was almost blind. Six months after the commencement of the trouble he came under Dr. Janeway's care, and an ophthalmoscopic examination showed double optic neuritis, with choked disk. At that time he was entirely blind in one eye, and almost so in the other, while he suffered intense pain in the right eye. There was well-marked left hemiplegia, and three days before he died the boy had severe convulsions. At the autopsy a tumor was found in the motor tract, the growth occupying the site of the ascending central convolution. As an offset to this case, however, Dr. Janeway mentioned one of a woman who had a tumor of the temporo-sphenoidal lobe, yet never suffered from paralysis. The tumor was a spindle-celled sarcoma. Another case was that of a patient of twenty, who was struck in the head, and afterwards suffered from left hemiplegia in consequence. He also suffered from convulsions, more marked on one side of the body than the other, and very severe pain in one side. At the point of injury trephining was resorted to by Dr. Mott. There was seen to be pachymeningitis, but the needle of the aspirator failed to show the presence of an abscess. Under Dr. Janeway's advice, no further trephining was practiced in the attempt to find a deep-seated abscess, as the character of the convulsions seemed to show that the source of irritation was probably on the surface of the brain. The autopsy revealed extensive suppurative pachymeningitis, and a small accumulation of pus in a sac at one point. The last two cases mentioned had a bearing on the question of diagnosis when the sixth pair of nerves was affected in connection with pachymeningitis.

The paper being now open for discussion, **Dr. E. C. Seguin** said that he was especially interested in the first part of it, because it was a subject with which, as a specialist in nervous disease, he was less familiar than the latter part, and he could not but recognize the great difficulties in diagnosis which one was liable to meet with in various affections simulating cerebral disease in many of their symptoms. This was particularly true in regard to renal disease, and when this was accompanied with miliary aneurism and extravasation, he thought a double diagnosis must be granted. Of late years much had been done to throw light upon the relations between the kidneys, heart, arteries, and brain, and since Charcot's discoveries the former idea, which had always been so universally accepted, that atheroma of the arteries must always precede cerebral hæmorrhage, had been disproved. On the contrary, cerebral hæmorrhage was very frequently due, not to atheroma, but to what might be described as a mere organic change in the arteries, and it was liable to occur in the young as well as in the old, as was illustrated in Dr. Janeway's case of the boy sixteen years old. Another class of interesting and often perplexing cases was met with in connection with disorders in the digestive function, accompanied by severe headache, vertigo, or even loss of mental power, which were attributed erroneously to so-called cerebral hyperæmia. He said, in conclusion, that he was glad to see that Dr. Janeway recognized so fully the new physiology of the brain, and stated that every day new facts were accumulating to establish the correctness of the accepted theories of localization. There could no longer be any doubt in regard to the anterior motor tracts, and the posterior sensory tracts were now becoming almost equally well recognized.

Dr. John C. Dalton thought that such papers as those of Dr. Janeway, which told us of the difficulties to be encountered in making out localizations, were more needed at the present day than the recital of cases which showed a plain and direct connection between lesions of special portions of the brain and certain definite results following in the way of paralysis, etc. Such cases were extremely interesting and satisfactory as far as they went, but it was as yet too soon to consider the matter finally settled, and the very difficulties presented in many of the cases related by Dr. Janeway would eventually be found to establish some of the points upon which at present they appeared to throw doubt. At one time it seemed that a grand new era had already been completely established in the scientific world, and that all that we had to do was to map out the brain in the same way that the phrenologist had mapped out the various regions of the cranium. Then difficulties began to show themselves, but though many investigators had become discouraged, enough facts had been now established to show that this new era had in reality been inaugurated. There were already many remarkable corroborations of the experiments of the physiologist by the clinical observations of the pathologist. Still, the experiments on dogs showed that while distinct paralysis was produced by destruction of the so-called motor tract in the brain, yet in a fortnight it was found that this paralysis had passed away. This might possibly be explained on the theory that there were other cells of similar character in the gray matter in the vicinity, which were capable of performing the same function, but never having as yet been called upon to do so, it was necessary that they should go through a preliminary course of training, as it were, before they could take the place of those removed. This was not altogether satisfactory, but was, perhaps, as much so as any explanation that could be offered. It was true, however, that when the brain was injured in animals locomotion was recovered much more quickly in those of an inferior grade than those of a higher grade, like the dog and horse, and Charcot had positively asserted that whenever in man there was destruction of the gray matter of the cerebral convolutions, the paraplegia was permanent. In the course of his remarks Professor Dalton spoke at some length in regard to the experiments of Goltz on dogs. He operated principally by destruction of parts, and by much practice succeeded in keeping animals alive for a long time under the process. His method was to remove a small portion of the cerebral cortex at a time, and then he would repeat the operation again and again until a large portion of the convexity on both sides of the brain had been destroyed. There was one dog in particular who had more than three quarters of the convexity of both hemispheres removed, and yet lived for more than a year. The results of his experiments went to show that it was impossible to permanently paralyze a single muscle of the body by destruction of the cortical substance, and hence he did not hesitate to assert that the assumption that particular portions of the cortex presided over special functions was altogether untenable. Goltz's views, however, had not been accepted by the best authorities of the present day.

After some remarks by Dr. Birdsall, **Dr. H. Knapp** stated that in his experience the appearance of choked disk or optic neuritis could not be used to any satisfactory extent for cerebral localization, and Dr. Janeway brought the discussion to a conclusion.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

INDUCTION OF PREMATURE LABOR BY MANUAL DILATATION, WITH FATAL RESULT.

February 11, 1882. **Dr. Reynolds** read the case, which is published in full on page 363, and also a successful case of manual dilatation in eclampsia.

Dr. Sinclair expressed anew his faith in the process of manual dilatation, and remarked that he had been four hours in trying to dilate the cervix, confident that in time it would yield, and feeling secure of the matter in hand. He referred to a case where manual dilatation succeeded after three hours' effort, after failure with Molesworthy's dilators.

Dr. J. Stedman reported the case of a patient with placenta prævia. At the seventh month he found her flowing profusely, the placenta presenting. After manual dilatation for about an hour, the child was turned, the placenta being pushed aside, and delivery was successfully accomplished. In another case of placenta prævia the placenta was presenting without much hæmorrhage. Pressure had hardly been begun with Barnes's dilators when the patient was seized with convulsions. Manual dilatation was substituted, the child was turned and delivered, and both child and mother recovered, except that the latter had unilateral paralysis for some time afterwards, which yielded to appropriate treatment.

PELVIC EFFUSIONS AND THE IMPORTANCE OF THEIR EARLY RECOGNITION, WITH REFERENCE TO TREATMENT, WITH A REPORT OF ELEVEN CASES.

DR. LYMAN read the paper.[1] Dr. Lyman, in answer to remarks by Dr. Reynolds, replied that what he meant to say was that puerperal cellulitis was much more likely to terminate in suppuration than pelvic peritonitis. The induration remaining from an old effusion being recognized, it should be considered as a focus for suppuration under any unusual irritation, such as excessive coition, colds, the recurrent monthly congestion of the parts. The treatment of these exudations was simply rest, fomentations, hot douches, iodine, blisters, etc.

DR. BAKER remarked upon the difficulty in diagnosis between old pelvic cellulitis and malignant disease in the pelvis, the cases sometimes being not easily differentiated. He referred to a doubtful case seen some five or six years ago which proved to be one of pelvic cellulitis, and which for a number of months remained hard throughout, but finally, under the use of hot vaginal douches, began to soften at the edge, not as a whole, and in this characteristic revealed its true nature.

DR. SINCLAIR observed that it was not unfrequent for the diagnosis of malignant disease to be made in a case which has nevertheless continued for years. In some such cases a history of inflammatory trouble has been found which has thrown a different light on the case. This point was illustrated by a patient formerly under Dr. Sinclair's care at the Channing Home, supposed to have malignant disease in the pelvis. She was finally removed from the Home on account of her good general condition. Dr. Sinclair was then able to unravel the history of her case, and from this, aided by an examination, came to the conclusion that the patient was recovering from an attack of pelvic cellulitis. He was not at that time familiar with the method of detection by softening of the edge.

DR. LYMAN called attention to the great danger of neglected cellulitis. In an instance which Dr. Sinclair had seen with him four or five years ago the patient got well, apparently, went to Maine, having more or less uterine disturbance, and was lost sight of. During the last fall another attack occurred, no doubt due to a rekindling of the old trouble. The results of cellulitis, he said, might remain, if neglected, for a lifetime. He did not believe that the advice of some distinguished authors to let these things alone, after the suppurative process had commenced, was reasonable. In one of the cases now reported the result of such expectant treatment was an opening, lasting for fifteen or sixteen years, into the bladder. A woman was never out of danger, certainly not until the menopause, when she had had one of those pelvic abscesses which had been allowed to go on without treatment. Treatment would obviate a vast deal of suffering and not a little mortality.

Dr. Lyman said he had aspirated a good many cases without getting pus, but no harm was done; on the contrary, the irritation of the puncture had been sometimes sufficient to stimulate absorption. Dr. Lyman observed that not more than half the cases of simple effusion were seen, or recognized when seen, any more than slight effusions into the pleura. In case, however, the peritonitis continued longer, one would in time have cellulitis following it; it was incredible that the thin peritonæum could be affected without resulting cellulitis. With cellulitis occurred a plastic effusion which was not to be got rid of so easily. Various circumstances might excite an effusion, the point of departure of an abscess. He would not touch a serous exudation, as it was likely to be absorbed; a plastic exudation remaining, nobody would put a needle into that, unless suppuration was suspected, but such a patient would need to be watched; she was liable to suppuration because she could not be kept still long enough. The suppurative process would extend the cellulitis everywhere. Dr. Lyman thought it quite possible that a pelvic peritonitis following labor would take that course. Cases, however, which were *primarily cellulitis* after labor were much more likely to be followed by an abscess, especially after injury.

DR. BAKER said it seemed to him that the reader had well insisted upon watching the case, and not letting it go out from observation until every part of the exudation had disappeared. He would ask in what proportion of cases without marked suppuration the temperature had indicated the presence of any inflammatory action?

DR. LYMAN replied that the temperature had been taken regularly, and the patients had been kept in the hospital till pretty nearly well. He could not give the exact record without referring to the chart. With pain and quickened pulse no doubt that the thermometer would indicate it. High temperature is not so marked an indication of suppuration as rigors, sweating, local pain, irritability of the bladder and rectum, where we know that there is already an old exudation.

STATED MEETING OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON, FIRST THURSDAY OF MARCH, 1882.

HENRY M. FIELD, M. D., SECRETARY.

WM. G. WHEELER, M. D., president, in the chair.

IODOFORM PENCILS.

The **SECRETARY** read a letter from Dr. Ephraim Cutter, of New York, inclosed with copies of his monograph upon Iodoform in Uterine Lesions, etc., which was read before the Society in November, and since published in the *Therapeutic Gazette*. After the reading of his paper, Dr. C. W. Stevens, of Charlestown, had shown specimens of uterine suppositories of iodoform, made for himself, and used by him in his practice for some time past. Objection was thereupon urged against their very prominent and persistent smell. Dr. Cutter had requested Parke, Davis & Co. to make a similar uterine pencil or bougie, but invested with gelatine so as to conceal the objectionable odor, and accompanying Dr. Cutter's letter, accordingly, were specimens of the pencils thus made, of varying length and size.

A. L. **NORRIS**, M. D., read by appointment a paper with title,

---

[1] Printed in the Boston Medical and Surgical Journal, vol. cvi. p. 193.

THE PLACENTA, ITS DEVELOPMENT AND ITS DISEASES.

The author disclaimed, for the most part, original research, but would endeavor to give in succinct form the results of the investigations of others, and this the more in detail as the placenta is so seldom, at least in this country, made the object of careful study either by the medical student or the physician. First, of the anatomical structure of the interior of the uterus. Developed within the mucous membrane, the characteristics of which tissue were given, are certain glands which have long been the objects of observation and, within recent years, of especial study, as they are found to perform a most important part in the scheme of reproduction. A *résumé* was here given of the consideration which the utricular glands have received from the time of Malpighi, who, in 1681, noted the important fact of their increased size in pregnancy, up to the present.

Certain significant modifications, attendant upon menstruation, do not occur at the time of the flux, but develop before it. The hæmorrhage is not, in fact, the expression of the greatest congestion, but is a process due to the fatty degeneration of the uppermost layers of the mucous membrane, and is already retrogressive. Thus the normal process of menstruation lies in this, that the outermost layers of the proliferated mucous membrane are exfoliated, and thereby a hæmorrhage is produced. Thus may be explained the so-called false membrane of dysmenorrhœa, which is only an increase in this process, the exfoliation being in layers or shreds, and not in minute particles. A microscopic view, magnified and illuminated and thrown upon a screen, showed at this point the glands and their functional changes. Next followed a series of slides demonstrating the double layers of the decidua vera, and the marked development of the utricular glands, the specimens having been recently prepared conjointly by the author and Dr. Holt, of Cambridge, from the pregnant uterus of the pig.

The changes produced by the periodically increased functional activity of the glands occasion a practical closure of the uterus, the opposing surfaces meeting at every point before the ovum has escaped from the Fallopian tube. The investigations in this direction by Professor Ercolani, translated by Dr. Marcy, of the Society, have been especially painstaking and lucid, and to these we chiefly owe whatever we have of full and exact information. This glandular formation affords to the ovum a protection until its connection with the uterus shall have been made complete. After delivery this same membrane, much modified in the mean time, is thrown off with the ovum, and so has received the name of decidua caduca. This consists of two chief portions, separated in early pregnancy, one called the decidua vera, as already seen, and the other decidua reflexa. True union between these occurs after the third month. Prior to this epoch there is a considerable interspace, and therefore it is, probably, that menstruation may occur for a month or two after conception, and that a sound passed into the uterus at this early stage does not necessarily produce abortion. The decidua serotina is limited to that part on which the ovum rests, and where the placenta is eventually developed. William Hunter taught that the ovum, in escaping from the tube, pushed the decidua before it, and so formed the decidua reflexa, but in one of his photographed views, shown to the Society, he still demonstrates the patency of the Fallopian tube and the product of the utricular glands, thus picturing more truthfully than he knew, and narrowly escaping the full discovery.

What becomes of the decidua on delivery at full term has been a subject of earnest discussion from the times of Simpson, — this authority teaching that it undergoes a kind of fatty degeneration, which serves as the determining cause of labor. It was long believed that the entire membrane was thrown off, and the muscular wall laid bare, a new mucous membrane being formed during convalescence. We are set right in this, however, when we remember that the decidua is not the mucous membrane, but a product of the utricular glands, while from the epithelium of the glands themselves a new epithelium is formed to replace that expelled.

With this glance at the function of the utricular glands, the author introduced their product, the normal placenta.

First named by Fallopius in 1561, this organ, like the spleen whose mass is formed by blood, is subject to great variation in size, consistent still with normality of action, being estimated to be nearly double in size and weight, when in performance of its function, above what obtains when it is removed from the body. The reader proceeded to give a detailed account of the morphology of this organ. Its exact location in the uterus can often be determined by auscultation and palpation, especially when attachment is had to the fundus or anterior wall. Piorry is said to have been able to map out its exact outlines by percussion. The reader next traced the development of the placenta — literally *ab ovo* — from its double origin in the fœtal and maternal portions, — this in terms so precise that abstract is hardly possible. His monograph closed with a review, statistical and otherwise, of the Placentæ of Multiple Births. The paper was liberally and effectively illustrated, at frequent intervals, by illuminated and magnified microscopic slides.

DR. MARCY offered brief remarks upon Dr. Norris's contribution, and showed a series of plates calculated to illustrate the development of the mucous membrane of the uterus. The fourth plate exhibited gave a view of the changes which go on within the uterus, stimulated by pregnancy and yet destitute of an ovum, taken from a case of the doctor's of death from tubal pregnancy about the tenth week, — the uterus acting under the influence, so to say, of reflex nervous excitation. The decidual formation was evident.

DR. NORRIS asked how such a decidua would differ from a menstrual decidua.

DR. MARCY replied that the latter would be the same in kind but less in degree. He also demonstrated, by means of a plate from Hunter, the enormous dilatation of the maternal vessels prior to the formation of the lacunæ.

DR. STORER read a circular letter, received from Dr. E. W. King, of New Albany, Ind., containing a series of questions relating to placenta prævia and requesting of Fellows a report of their experience in this class of cases.

DR. MARCY remarked that Dr. David Hunt, 149 Boylston Street, is making studies of the embryo, and would be glad to receive specimens of any stage of development. The doctor also stated that in the continuation of his studies of the uterine changes occurring in the earlier periods of pregnancy, he desired a furtherance of favors from members of the profession, in respect of the sending of specimens from abortions or of any of the forms of diseased placenta. Specimens, especially of the embryo, are best preserved for study when immersed immediately in a considerable quantity of Müller's fluid.

HOSPITALISM.

Dr. Storer read his reply to a letter from Dr. James L. Cabell, of the University of Virginia, who is about to write on the subject of hospitalism, especially in its relation to mortality after the major operations. Concerning ovariotomy, Dr. Storer said he preferred to operate in a private house rather than in a hospital, in the country rather than in the city, and for nurses he preferred the Catholic sisters. He stated he had himself used the spray prior to 1868. He also instanced Dr. Tait's one hundred and ten cases with nine deaths, and remarked that Tait had discontinued the use of Lister's method.

Dr. Marcy was requested to prepare and read at the next meeting a paper upon Some Forms of Disease of the Placenta.

Recent Literature.

The Medical Digest, or Busy Practitioner's Vade-Mecum. Being a Means of Readily Acquiring Information upon the Principal Contributions to Medical Science during the last Thirty-five Years. By Richard Neale, M. D., London. Second edition. London: Ledger, Smith & Co. 1882.

The first edition of this work formed the seventy-fifth volume of the new Sydenham Society's publications in 1877, and was originally undertaken for the author's individual benefit, without a view to publication. It is not offered to the profession as a complete *Index* to all medical literature, but as a *Digest* of certain specified and widely-diffused journals — all British with the exception of the *American Journal of Medical Sciences*, to which occasional reference is made. Those requiring an Index will, of course, find it in the *Index Medicus*, and our countrymen seeking a key to their own medical literature will find the Digest but a very imperfect one.

As a ready reference to British periodical medical literature during the past thirty-five years, the Digest will prove very useful to the busy practitioner or medical writer. Dr. Neale says he has spent, upon an average, four hours a day for the past thirty-five years in bringing the work to its present state of perfection. The original manuscript contained 1879 pages; the book has over 120,000 distinct entries. Any complexity of plan the author has endeavored to avoid by an Index, which has been made as full and comprehensive as possible, and which, referring to all subjects under every variety of designation, contains nearly ten thousand references.

The sources of information especially represented are the *British and Foreign Medico-Chirurgical Review* from 1848 to 1877, the *Lancet* from 1837 to 1881, the *Medical Times and Gazette* from 1850 to 1881, the *British Medical Journal*, the *Practitioner*, the *London Medical Record*, *Rankin's Abstract* from 1845 to 1873, and *Braithwaite's Retrospect* from 1874 to 1881.

The above gives a fair idea of the scope of the work. Its absolute value depends of course largely upon the readiness of access to the files of the journals referred to. But the author claims, and with some reason, that even without the works at hand to which reference is made, "a vast amount of useful, and in many cases novel, information may be obtained."

The author likewise suggests that "gentlemen who are so much aided in their researches by the Digest, as their published lectures and papers show, might mention their indebtedness, a courtesy that is almost invariably omitted."

The Digest, with the Index, makes an octavo volume of 725 pages.

Twenty-Eighth Annual Report of the State Commissioner of Common Schools to the General Assembly of the State of Ohio for the School Year ending August 31, 1881. Columbus: G. J. Brand & Co. 1882.

A volume of valuable statistical information concerning the common schools of the State of Ohio.

About thirty pages are devoted to remarks on School Buildings in their Relation to the Health of Pupils, in the course of which some excellent criticisms and suggestions are made. We are glad to notice, as indicated by a quotation, that the efforts of the Journal in behalf of school hygiene are appreciated in Ohio.

A Treatise on the Science and Practice of Medicine; or the Pathology and Therapeutics of Internal Diseases. By Alonzo B. Palmer, M. D., LL. D. Volume II. New York: G. P. Putnam's Sons.

This volume of Professor Palmer's work treats of diseases of the organs of the respiratory, circulatory, urinary, male generative, and nervous systems. The criticisms made upon the first volume apply also to this, which follows the same plan, and exhibits the same merits and defects. The publishers have, however, so far profited by one of them as to indicate upon the title-page, if not upon the back of the cover, that this is one of two volumes, thus not leaving the casual purchaser under the impression that he has a work complete in one volume.

What to Do in Cases of Poisoning. By William Murrell, M. D., M. R. C. P. Second edition. Detroit: George S. Davis.

The text has been revised for this edition, and a list of "fatal doses" added. Next to carrying the contained information in the head, it would be well for the physician to carry this little book in his pocket. It is very small and also correct.

— A story comes from Chicago of an accoucheur who attended a cyprian and delivered her of a fine boy. The blank form of a return to the Board of Registration required the physician to give the name of the child's father. This obligation caused the practitioner no little solicitude, but he finally acquitted himself by writing in the certificate *E Pluribus Unum.*

Medical and Surgical Journal.

THURSDAY, OCTOBER 19, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

MALARIA AND THE COURTS IN BERKSHIRE COUNTY.

Although "fever and ague" was a disease not unknown in the early history of New England, and prevailed in a few towns for some years towards the close of the eighteenth century, for a few years at the beginning of the present century, and again from 1828 to 1836, the present epidemic, if so it may be called, has been steadily spreading from the shores of Long Island Sound more or less regularly for thirty-two years. Its origin seemed to be in the general obstruction of the natural drainage of the soil by the railroad from New York to New Haven acting as a dam to the small streams and swamps along the shore. Its progress has been chiefly along the beds particularly of the Connecticut and Hudson Rivers, independent of reservoirs and dams, and near natural and artificial ponds, especially those built in the course of the smaller rivers. On the Hudson River there is scarcely a town south of Albany in which the low land is not more or less associated with malaria; on the Connecticut there has been marked prevalence of the disease from Hadley southward, beginning with Springfield in 1820; on the Housatonic and Hoosac Rivers the cases of ague have all been adjacent to low, swampy places or near reservoirs, and the other cases were scattered over forty-eight towns in the State, for the most part in or near low, wet land, chiefly during the past five years. At the same time the disease has continued to prevail in the low land of Staten Island, near the obstructed water-courses in New York City, and in the places to the south where it has long been thought to be endemic.

In such a wide-spread prevalence of the malarial disease many persons living on hill-sides or high land have been subject to it, but it has begun almost without exception on low land, where its severity has always been the greatest. There are many houses on high land in whose vicinity the known conditions of malaria exist, namely, heat, moisture, wet soil, and stagnation of drainage; many of the people ill with intermittent fever, although living on high land, contracted the disease while exposed to its causes on low land, and a large number of the hills are so near swamps, ponded bodies of water, and low river beds, as to have the germs of the disease carried directly to them in the air.

One of the most striking epidemics began in Lenox, three miles below the noted summer resort in Berkshire County in 1878; and in the five years up to this autumn there had been three hundred and twenty-six persons attacked, in many cases one person representing several attacks of fever (chiefly quotidian and tertian), out of a population of eight hundred, along the two shores of the ponded reservoirs of the Smith Paper Company. The first mill-pond is quite small; the second was raised three or four feet ten years ago, setting back the water a distance of four miles, so slight is the natural fall of the river at that place. Of thirty-one houses on the easterly shore, towards which the prevalent wind blows in summer, only five escaped the fever; of one hundred and seventeen houses on the other side there were seventy-nine in which cases of malarial disease were observed.

The town of Lenox, in the name of the State, brings suit against the owners of the mill-pond for creating a source of pestilence, and the case is now tried before Judge Brigham and a jury in the Superior Court at Pittsfield. The mill-owners have already paid the farmers very large damages, reported to be $60,000, for flooding their land and damaging its agricultural value. Of course there was no thought, when their dam was built, that it would be a cause of malarial fevers, as Massachusetts was at that time thought to be too far north to be in any danger from that source. The case will be watched with great interest.

COLLEGE ATHLETICS AND PROFESSIONAL TRAINERS.

Of late a somewhat growing tendency has manifested itself toward the removal of the sharply defined barriers which it used to be thought should separate the training and the contests of college athletic organizations from professional influences. The employment of professional trainers in the preparation of university crews, and public contests between amateur college base ball nines and professional nines are not unusual.

This tendency, with the attendant influences and results, has, for some little time back, forced itself upon the attention of the Faculty of Harvard College, and last spring a committee of three of their number, of whom Dr. Sargent, the superintendent of the gymnasium, was one, was appointed to take general supervision of college athletics.

The attention given, since their appointment, to the various questions connected with college athletics has led the committee to the conclusion that the general demoralizing effects on college sports of the use of paid professional trainers is in no way counterbalanced by the better records which may result therefrom. The committee is led, moreover, to believe that any competition between professional sporting men and undergraduates has a decided tendency to negative all the good effects of college athletics, to degrade the students who train, and to turn from its true course the whole current of amateur sports.

These conclusions on the part of the committee have led the college authorities to forbid the college grounds to professional trainers, and college organizations, such as the base ball nine, are to be forbidden to engage in contests with professional clubs. The latter step will be taken by the Faculty of Harvard College in common with those of the other principal colleges of the country, Yale alone refusing to enter into such an agreement.

This question of the propriety of permitting professional influences and experience to come in contact with amateur athletics in our colleges is one, of course, like most others, in regard to which something may be said on both sides; but we are inclined to agree with the committee of the Harvard Faculty, that much more is lost than is gained by contact with such influences. The advantages to be derived from the hints and experience of professional trainers, who themselves are or have been sporting men, can be largely supplemented from other sources; and it is not essential to a wholesome activity in the various games of ball that the college clubs should initiate themselves into all the "tricks of the trade," or, if necessary, these are not to be acquired only by actual public competition.

Certainly we think that the majority of those who are disposed to regard athletics as a means and not as an end, will take the view of the subject adopted by the Harvard Faculty, while those whose affections are set rather on the "best record" than on a sound general physique may perhaps dissent. The problem to be solved in seeking to control any amateur athletics consists of course in finding the happy mean between the amount and severity of competition necessary in order to lend interest and excitement to their cultivation as hygienic instruments, and the amount which exalts the "record" into the object of pursuit. When the latter stage is reached the wager is soon called in to supplement the interest of the "record," and then the professional influence is wholly bad.

For some years past Harvard undergraduates have been under expert supervision in their gymnastic exercises, the good effects of which have been very apparent in the exhibitions of their Athletic Association, as well as in the part taken by them in the intercollegiate athletic association contests.

Such control and supervision can, and we understand will, be extended to the other exercises as will obviate the dangers of injudicious or excessive training on the part of those who care to be advised.

If the colleges remove at once the advantages and drawbacks attendant upon intercourse with "professionals," they will naturally see that the former are made good as far as may be from other sources.

OPENING OF THE FIFTIETH SESSION OF MCGILL MEDICAL COLLEGE. CELEBRATION OF THE SEMI-CENTENNIAL BY THE FACULTY.

The semi-centennial of the founding of the medical department of McGill College, Montreal, was celebrated in that city on Thursday, October 5th, by the Faculty, by an address delivered before them and their invited guests, and by a banquet in the evening at the Hotel Windsor, to which a large number of invitations were issued to physicians in the United States and Canada, and to the graduates in medicine of the College.

About two hundred guests sat down to table, the chair being occupied by Dr. R. P. Howard, Dean of the Medical Faculty. Toasts were proposed to the queen, the governor-general, the principal of the University, sister colleges, the graduates, sister professions, the four founders, the Montreal General Hospital, the ladies. To the toast of sister colleges, proposed by Dr. William Osler, with a complimentary allusion to Harvard University, Dr. J. R. Chadwick, of Boston, who was present, responded in behalf of the Harvard Medical School. A letter from an anonymous benefactor was read at the dinner, pledging a gift of fifty thousand dollars to the Medical Faculty provided an equal sum were raised.

The *menu* reflected great credit upon the managers, the typographers, and the Montreal market. Upon the outside appropriate quotations from Shakespeare and Swift encouraged the guests to a valiant and cheerful gastronomy, which the articles announced within the covers must have amply satisfied. Extracts from the old English classics preceded and followed each course on the *menu*, Roman punch being followed by an admonition borrowed from Shakespeare, —

> "For this, be sure to-night thou shalt have cramps."

The medical department of McGill University is the issue of the Montreal Medical Institution, established in October, 1822, by four physicians, who were the medical officers of the Montreal General Hospital. The first session of which there is any record is that of 1824–25, at which twenty-five students attended. The Medical Institution continued for five sessions, and in 1829 became the Medical Faculty of McGill College, thereby preserving for educational purposes the bequest of the Hon. James McGill. In 1823 an attempt was made to organize McGill College, and five professors were appointed, one, Dr. Fargues, to the chair of medicine. They never entered upon their duties. Up to 1853 there was only one professorship in the Medical Faculty. At this date the various lecturers were made professors. The lectures were suspended during the political troubles of the rebellion; there were no sessions in 1836–37, 1837–38, and 1838–39. It is owing to this gap that the present is only the fiftieth session, though the Faculty was organized in 1829. In reality this is the fifty-fifth session of the School, which is the direct continuation of the Medical Institution, and the fifty-eighth year since its foundation in 1824. The lectures of the Medical Institution were given at No. 20 St. James Street; the School afterwards moved to St. George Street; from 1845 to 1852 the lectures were delivered in the College Building, Sherbrooke Street; from 1852 to 1872 in the Faculty Building, Cotté Street; and in 1872 the present building was erected by the governors in the University grounds.

There are 917 graduates in medicine of the University, of whom 192 are dead; of those whose addresses are known, there are in Ontario 237; Quebec, 207; United States, 139; Great Britain, 34; Manitoba, 25; New Brunswick, 9; Prince Edward Island, 8; Nova Scotia, 6; Newfoundland, 4; British Columbia, 4; India, 2; New Zealand, 3; West Indies, 6; Sandwich Islands, 1.

The following list gives the order of seniority in the ten oldest medical schools on this continent: —

(1.) University of Pennsylvania, 1765. (2.) Harvard, 1782. (3.) Dartmouth (Hanover, N. H.), 1797. (4.) College of Physicians and Surgeons, New York, 1807. (5.) University of Maryland, 1807. (6.) Yale, 1810. (7.) Medical College of Ohio, 1819. (8.) Bowdoin (Maine), 1820. (9.) Jefferson Medical College, 1824. (10.) McGill (Medical Institution), 1824.

MEDICAL NOTES.

— Judge Dixon, of New Jersey, in a recent charge to the grand jury of Paterson, called their attention to the case of a man employed at the pest-house in that city as nurse to a small-pox patient, and who, having the germs of the infectious disease about him, went recklessly to his family, communicating the disease to his children, one of whom died. In commenting on this case he said: "If a man, conscious that he carries about with him the germs of a contagious disease, recklessly exposes the health and lives of others, he is a public nuisance and a criminal, and may be held answerable for the results of his conduct. If death occurs through his recklessness, he may be indicted for manslaughter. It is held that where a person knowingly communicates a contagious disease to another and death results the crime is that of manslaughter." Judge Dixon furthermore added: "The man may be indicted also for spreading the disease by conscious exposure of others thereto by his presence in public places, such as on the streets, in halls, etc. He might be indicted as a public nuisance for endangering the public health in this way even if no consequences had followed. The law provides some penalty for such offenses against the public safety."

— Professor Leeds, who was instructed by the joint committee on pollution of Newark and Jersey City to make an investigation into the alleged poisoning of the Passaic River with arsenic washed from a label factory in Monticlair during the recent floods, has reported that he has been able to detect no traces of arsenic or other poison in the water. The samples of the water submitted to him for analysis were taken from the pumping stations at both Newark and Jersey City. In view of the possible contamination of the Passaic in this way, however, one of the daily papers puts the very pertinent inquiry, why factories which use large quantities of poison are permitted to remain on the banks of a stream that furnishes the water supply of a city numbering 140,000 people? The common report was, that no less than a ton of arsenic had been washed into the river from the single establishment mentioned.

— It is suggested by Dr. H. Holbrook Curtis, in the *Medical Record*, that the popular remedy for nose-bleed, of tying a string around a finger, owes its origin to the practice of ligating an extremity as a means of arresting bleeding. In that case the device is not altogether an inane one, even if its practice is useless. It seems that this "bleeding of a man into his own vessels" is as old as Galen, from whom modern therapeutics has only revived it. Dr. Curtis, it may be added, has had very good success with this treatment in certain alarming cases of pulmonary hæmorrhage, when all the ordinary hæmostatics had failed. It is also recommended as a remedy in the dyspnœa of pneumonia by diminishing the congestion, perhaps after the suggestion of Esmarch of tying the extremities after gun-shot wounds of the lungs.

— The *Sanitary Engineer* has proposed to the National Board of Health, since the refusal of Congress to grant a sufficient appropriation to defray the expenses of publishing their *Bulletin*, to print the most important information hitherto published in the *Bulletin*, and the Board has accepted the offer.

— It is reported in the daily papers that the wife of President Gonzales, of Mexico, has arrived in Chicago to prosecute her studies in medicine and surgery. Toxicology and gun-shot wounds are respectfully recommended to her especial attention.

— The conflict between scientific and gastronomical claims upon the members of conventions and congresses is sometimes sharp. At the recent International Congress of Hygiene at Geneva, when twenty-four different nationalities were represented by four hundred delegates, the entertaining was on a scale proportionate to the augustness of the assembly. On one day the members, to the number of three hundred and fifty, were the guests of the Swiss government in a sail on the lake. The Italian representatives seem to have been the only ones alive to their responsibilities, for in the midst of the inspiriting influences of clear skies, blue waters, beautiful music, and ravishing scenery, these devoted men held a meeting in the cabin to discuss cremation!

NEW YORK.

— At the last meeting of the Board of Health Dr. S. A. Goldschmidt, inspector of offensive trades, made a report in regard to the condition of the Harlem tunnel on Fourth Avenue, in which he stated that the residents along the avenue complain of the dust, gas, and smoke from the passing locomotives; while the passengers through the side tunnels, in which the local rapid transit trains run, complain of the heat, gas, smoke, and foul air. It is impossible, he says, to eradicate all causes of complaint; but nearly all the smoke which pours out from the tunnel during the passage of the trains is due to the careless management of the engines, and if the regulations of the railroads that no engine shall come from the round house with a fresh fire, and that no coal shall be thrown into the furnace except between One Hundredth and One Hundred and Nineteenth Streets, were strictly enforced, it would do much toward improving the atmosphere of the tunnel, and the escape of volumes of smoke so often seen issuing from the ventilating shafts would cease. At the conclusion of his report Dr.

Goldschmidt makes the following suggestions: First, the strict enforcement of the regulations in regard to firing the locomotives; second, the use of a better grade of coal, containing as little sulphur as possible; third, the introduction of smoke-consuming locomotives on the rapid transit trains; fourth, straightening the ventilating shafts, and keeping the side ditches and drains clear, so as to reduce the dampness to a minimum; fifth, lighting the headlights and lamps while passing through the tunnel. These were approved by the Commissioners of the Health Board, and a resolution was passed by them requesting the managers of the three railroads concerned to take cognizance of them.

— N. W. Andrews, son-in-law of Cyrus W. Field, has brought suit against Samuel H. Smith, the owner of the Hotel Bellevue, at Seabright, New Jersey, for ten thousand dollars damages for the improper sanitary condition of his house, which he alleges was the cause of the outbreak of the typhoid fever at that resort during the latter part of the summer and early autumn. He will also bring action against James L. Corey, the lessee of the hotel, for five thousand dollars damages for alleged blackmail in compelling him and Cyrus W. Field, Jr., to pay five thousand dollars for the use of the hotel after the fever made its appearance.

— In an investigation just held before a commission appointed by the supreme court and a sheriff's jury, as to the sanity or insanity of William Keating, who, for nearly two years past, has been an inmate of the insane asylum on Ward's Island, the jury found a verdict in favor of the man's sanity, and he was at once discharged. Dr. J. W. Ranney, the president of the commission, in charging the jury, said that he hoped the day would soon come when some proper and competent examination of persons alleged to be insane would be made before their commitment to a lunatic asylum.

— On the 10th of October Dr. Wm. B. Carpenter, of London, gave a summary of his investigations into the structure of the *Eozoön Canadense*, illustrated by many specimens exhibited under the microscope, before the New York Microscopical Society, and after the meeting a dinner was given by the Society to Dr. Carpenter at Delmonico's.

PHILADELPHIA.

— At the stated meeting of the College of Physicians held October 4th, several interesting communications were received. Dr. Arthur V. Meigs read a paper entitled Clinical Observations in Albuminuria based upon a study of Sixty-Two Cases seen in Private Practice (which will shortly appear in this JOURNAL). Dr. H. Augustus Wilson described an Autopsy of a Case of Transposition of the Viscera; and Dr. Addinell Hewson presented a paper recommending Flexible Glue as a Substitute for Adhesive Plaster. A memoir of the late Dr. H. Lenox Hodge was read by Dr. William G. Porter.

The library of the college is open daily (except upon legal holidays) from eleven A. M. to four P. M. Arrangements are contemplated by which it will be opened, during the coming winter months, in the evening also from eight to ten o'clock.

— The Pathological Society of Philadelphia has instituted a plan by which it has added many new members and infused fresh vitality into an organization which a few years ago was supposed to be doomed. The business committee found that notwithstanding the fact that supply of good papers and cases was not lacking, interest in the Society was declining, and the membership was steadily diminishing. It was then decided to hold a social reunion twice a year, and invite a number of eligible members of the profession to attend. The semi-annual conversational meeting in the spring and fall was selected as the occasion, and the first meeting of the kind was held last April, which was unexpectedly successful; it was well attended, and as a result renewed interest was shown in the Society; it is said by the treasurer, Dr. M. S. French, to whose personal interest in the arrangements much of the success is due, that thirty-two new members were added to the roll in consequence of that one meeting. Another meeting of the kind was held at the College of Physicians last month, at which Dr. J. Solis Cohen presented an admirable address on Tuberculosis of the Larynx, abundantly illustrated by preparations and diagrams. (The points of this paper will be presented hereafter.) At nine o'clock the Society adjourned to a lower room where a simple collation was spread, and where an hour was most pleasantly passed in social intercourse. Quite a number of new names proposed for membership were received by the committee, also, at this meeting.

The Publication Committee of the Pathological Society, and of the County Medical Society, have each issued a most creditable volume of Proceedings.

The receptions of the County Medical Society, which were so successful during the last two winters, have not yet been resumed this fall.

The visit of Dr. Morell Mackenzie, of London, to this city, was improved by the Philadelphia Laryngological Society, which tendered him a complimentary dinner on the 10th inst., and by Dr. J. Solis Cohen, who gave a reception at his house on the same evening, where the guest met a large number of Philadelphia physicians, and seemed well pleased.

— The seventh annual meeting of the Association of Medical Officers of American Institutions for Idiotic and Feeble Minded Persons, was held at the Pennsylvania Institution for Feeble Minded Children at Elwyn, Penn., on the 3d inst., and continued in session three days. Papers were read by George Browne and Mrs. George Browne, of Barre, Mass.; Dr. C. K. Mills, Pennsylvania; J. G. Stewart, Kentucky; H. M. Greene, Kansas; H. B. Wilbur, New York; William B. Fish, Pennsylvania; W. Hailes, Jr., New York; communications were received also from other prominent men.

— The Board of Trustees of the Norristown Insane Asylum held its third annual meeting on October 6th. The old officers were reëlected. The total number of cases under treatment during the year was (660 males, 579 females) 1239, of which recovered (71 males, 44 females) 115; died (55 males, 36 females) 91; and there were remaining (494 males, 456 females) 950; a few were transferred or removed by friends. The total sum expended during the year was $287,412.17.

— Among the interesting operations recently performed was the transplantation of a portion of a rabbit's conjunctiva to the human eye in a plastic operation performed at the Jefferson Medical College Hospital by Dr. William H. Little, Chief Assistant to Professor Thomson. The case was that of a healthy young man of about twenty-five years of age, who had had his face badly burned in the chemical works by a stream of sulphurous acid some months ago. One eye was completely destroyed, the other had a hazy cornea and adhesion of the upper eyelid to the globe of the eye. In the operation, before the class, the lid was dissected free, and several pieces of conjunctivæ taken from a living rabbit were transplanted and fastened in the gap. It is now more than a week since the operation, and its success seems assured. The grafts appear to have retained their vitality, and the patient has qualitative vision. It is believed that an iridectomy will now give him sufficient sight for ordinary purposes.

— Prof. John H. Brinton recently operated in an interesting case of ununited fracture of the inferior maxilla, which resulted from a fall from a mast by the patient, a sailor, who sustained the injury six weeks ago. Two weeks elapsed after the accident before proper aid was obtained, and an abscess had formed and some small fragments of bone were subsequently removed. In consequence of the loss of substance, the extremities of the bone could not be made to approximate, and consequently remained ununited. Dr. Brinton cut down upon the ends of the bone, freshened the surface by aid of the surgical engine of Dr. Benwill, who assisted at the operation, and fastened the fragments together, before doing which it was found necessary to extract one of the lower central incisor teeth. The patient is doing well.

— The corner stone of a new hospital in the southern portion of the city was laid October 8th. It is to be known as St. Agnes Hospital, and is located at Broad and Mifflin Streets. It is under the patronage of the Roman Catholic Church. The structure is being erected under the auspices of the Sisters of the Order of St. Francis. It has a frontage of 358 feet on Broad Street, and a depth of 200 feet on Mifflin and McKean Streets. The building, including basement, will be four stories in height, and will be built of Bucks County graystone, with granite trimmings. The total cost is estimated at $200,000. The central main building will have a frontage of 54 feet. The wings on each side will cover 108 feet with additional projections covering 88 feet. The first floor will be occupied by the administration offices and out-patient medical department. The chapel will be in the centre of the second floor, and will be surrounded with sick wards. The upper floor will be divided into wards of 27 by 46 feet in size. The wing buildings will also be devoted to wards. It is intended to accommodate 400 patients in the hospital. The kitchen, laundry, stables, ice-house, bakery, and storeroom will be in the rear of the main building. Work on the structure was commenced in March of last year, and the stone work will be completed to the first floor before the winter sets in.

— A child, three years of age, died in this city, October 10th, from drinking about four ounces of bathing whiskey contained in a bottle which it accidentally obtained possession of at its home. The coroner's jury found a verdict to this effect in accordance with the statement of the mother.

CHICAGO.

— The medical colleges have commenced work for the winter. The new "College of Physicians and Surgeons" opened with a class of over a hundred. The new college building is nearly completed. This building is well designed for the purposes of a medical college. It has two large lecture rooms and all the additional rooms needed, besides apartments for a dispensary. This building is four stories high; has two of its sides veneered with cut and carved stone; has a tower at one corner nearly one hundred feet high. Its cost has been about $75,000. The fees of the new college are only about one half as great as those of the other two regular colleges. Its requirements for graduation are practically the same as of the other colleges.

The Chicago Medical College opened with a class of about one hundred and fifty. Quite a number of changes have occurred in the faculty of this school since the last course of lectures. Dr. Dudley has become Professor of Gynæcology, Dr. Danforth of Clinical Medicine, Dr. Scharfer of Anatomy, Dr. Fenger of Pathology, and Dr. Owens of Operative Surgery. Altogether the present faculty is a strong one.

Rush Medical College opened on the 26th ult., and has a class of four hundred and seventy.

— The new staff of Cook County Hospital has settled down to work in a quiet way. Clinics are to be given to the students of all colleges, as usual, during the present course of lectures.

Two detached pavilions are being added to the hospital this season for the purpose of accommodating cases of erysipelas, puerperal fever, and other affections which require to be separated from other patients. The central executive building for offices, warden's residence, etc., is being built also. When these buildings are completed the capacity of the institution will be considerably increased. Now the full capacity is less than four hundred patients; one hundred or more will be added to the capacity by the new buildings.

— Dr. W. T. Belfield, Lecturer on Physiology in Rush Medical College, has been invited to deliver the Cartwright course of lectures in New York the coming winter. Dr. Belfield has accepted the honor, and will deliver the lectures near the holidays. They will probably be given to the study of disease germs and the recent investigations in this field.

Miscellany.

GUITEAU'S BRAIN.

IN the *Alienist and Neurologist* for October, 1882, Dr. Godding says of the macroscopic examination of Guiteau's brain, "When I saw with what difficulty the dura mater was torn away, I was surprised at the ivory whiteness of the brain substance, and remarked of the gray matter how thin some portions were anteriorly, and recognized that familiar, milky opacity of the arachnoid, extending over all the sulci of the superior convexity of both hemispheres of the cerebrum, and dipping down into the longitudinal fissure anteriorly, so startlingly like what I had so often seen in the autopsies of chronic mania, I questioned if it would be sufficient explanation for us to make to the public that this appearance was common in drunkards, and had been found in low types of chronic disease other than of the brain; that, indeed, it was often the result of cerebral congestion, and was frequently met with in advanced life; and if none of those conditions seem to exactly apply to Guiteau, to say further that Delafield is not inclined to attach any importance to it, and omit what Foville, and Greding, and Griesinger, and, in short, all writers on the pathology of insanity, have said of its frequency in the chronic forms of mental disease? And, since in the absence of observed lesions of the brain under the microscope [written before the microscopical examination of the brain were known], we certainly could not claim that mere opacity of the arachnoid proved the existence of insanity in any given case, would it do to boldly claim in the case of Guiteau that this thickened, diseased membrane should be accepted as conclusive proof that insanity did *not* exist, that by reason of its thickness it acted as a shield to his brain, even as his winter coat afforded a better protection than his summer duster? . . .

"The more I pondered the evidences of that autopsy, in conjunction with the retrospect of the life thus abruptly closed, the more I felt that it was just possible that the impartial psychological inquirers of the future, studying this remarkable case, might not be so unanimous as we had been in pronouncing this a 'happy ending.'"

"THREATENED TYPHOID."

MR. EDITOR, — There are two points in the communication of Dr. Edward T. Williams, published in the JOURNAL of the 5th inst., upon which I hope you will allow me to make a few comments. It is probably a fact that a very large proportion of true, uncomplicated cases of typhoid fever terminate in recovery, without any medical treatment whatever, provided the patient has received good nursing and sufficient nourishment in the liquid form.

Authors do not agree in the treatment of the distressing diarrhœa which usually accompanies the disease. I have noticed that those patients who have little or no diarrhœa get up stronger, and return to their accustomed duties much sooner than those who have been troubled with the same. My treatment of typhoid fever during the past eleven years has been a literal adherence to that laid down by the late Thomas K. hambers, M. D., in his admirable lectures upon the enewal of Life.

It has been my experience that after the above treatment has been followed for a few days the diarrhœa ceases; hæmorrhages from the nose and bowels are comparatively unknown; the temperature rarely exceeds 103° F., and a very large majority of the patients can take and digest large amounts of milk and beef tea. Relapses have been very few, and convalescence rapid and sure.

I have never yet used cathartics, always opening the bowels with enema when required.

Having had the above experience I cannot assent to the production of an "artificial diarrhœa by cathartics" as recommended by Dr. Williams.

The expression, "I was threatened with typhoid fever and Dr. —— was called and broke it up," has become so common, and is so generally believed, that I have long since found it to be a waste of breath to speak against it.

It is conceded by the best authors, and by those who have had much experience with the disease, that when the peculiar poison which constitutes *true* typhoid fever has entered and found lodgment in the human system, more especially in the intestinal glands, about all we can do is to carefully watch and safely conduct our patient through the disease, which I think will average about twenty-two days.

This average has been carefully computed from one hundred and thirty-three cases of *true* typhoid fever which have occurred in my practice during the past eleven years, and I must say, though it be to my discredit, that I have never been able to "abridge" or "cut short" one single case.

Yours respectfully,
PHANUEL E. BISHOP, M. D.

PAWTUCKET, R. I., *October* 8, 1882.

FORCED FEEDING AND OVERFEEDING.

THE *British Medical Journal* gives an interesting account, based largely on a review by Dr. Mayer, of the *Revue Médicale de la Suisse Romande*, of this method of treating diseases of nutrition and other constitutional affections where there is no opposition on the part of the patient, and where, therefore, the process would, perhaps, more appropriately be called *cramming*. We make the following extracts: —

"On October 28, 1881, M. Debove reported to the Medical Society of the Paris Hospitals the interesting and paradoxical cases of two phthisical patients in whom he had been able to supplement normal feeding, which intractable vomiting had rendered impossible, by alimentation by means of the œsophageal sound. The first patient, in the third stage of phthisis, had reached such a degree of anorexia that she rejected all food, even milk. M. Debove supposing that the anorexia might in this, as in other affections, be independent of any affection of the gastric mucous membrane, it occurred to him to inject a quart of milk into the stomach. It was well tolerated. The treatment was renewed with constant success, and soon the dose of food injected was increased, and from artificial alimentation he advanced to super-alimentation. Two quarts of milk, ten eggs, and two hundred grammes of scraped raw flesh constituted the daily ration of the patient. Under the influence of this *régime* the amelioration of her condition was so apparent that the treatment was immediately attempted in other cases.

"The instrument which M. Dujardin-Beaumetz now recommends — an œsophageal tube reduced to half its ordinary length, and therefore not reaching quite into the stomach — is introduced on the stylet. It is connected by an India-rubber tube to the lower part of a glass jar, into which is poured the alimentary fluid, and in the upper part of which jar air can be compressed by means of an India-rubber ball. This vase being placed on the table, the patient can himself handle the India-rubber ball, and regulate at his pleasure the amount of food introduced, and the rapidity of feeding. It is obvious that a simple tube and funnel of the simplest construction might be employed, and perhaps the simpler the better.

"In a few cases, in which the stomach appears to be dilated, it may be well, in the first instance, to wash out this cavity with a four per cent. solution of bicarbonate of soda, or six per cent. of sulphate of soda. In the absence of dilatation such treatment may be omitted, and it is only necessary, then, at once to introduce the aliment into the funnel of the jar. This consists, usually, of a sort of a broth of milk, eggs, and a certain quantity of meat. M. Dujardin-Beaumetz recommends the addition of common salt. At first finely scraped raw meat was employed, but lately M. Debove recommends powdered cooked meat for this purpose. The flesh, cut off a fillet of beef, is finely minced, pressed into a cake, carefully baked, then powdered, and passed through a silken tamis cloth. An impalpable powder is thus obtained, which resembles in flavor roast meat, and which represents four times its weight of raw meat. This is perfectly preserved so long as it is kept from wet. Its main defect is its cost, but this may be diminished by mixing it with cooked and powdered lentils.

"The vehicle employed is milk, two quarts a day, or, for some patients, two eggs are added to the bouillon.

"M. Dujardin-Beaumetz adds, sometimes, to the repast three or four spoonfuls of peptone or subnitrate of bismuth where there is intestinal irritation and diarrhœa.

"Some patients are intolerant of the œsophageal sound, and, if this cannot easily be got over, it constitutes a serious obstacle to the treatment. Occasionally the patient is seized with the desire to vomit, and there is a reflux of the fluid into the sound. This may often be overcome by gentleness and patience, and by the introduction of very small quantities of food at a time. In any case it is desirable to commence with moderate doses of food, not more than twenty-five drachms of powdered meat, but at each dose this may be gradually augmented. Moreover, the individual digestive aptitudes must be considered, and the occasional individual intolerance of special foods, such as milk, eggs, or soup. Food should never be given until it has first been tested, and found to be in a perfect state of preservation.

"As to the results of this treatment in phthisis, it is too early to pronounce any definite opinion; it would appear, however, that, even in the third and acute stage of phthisis, super-alimentation has prevented, at least arrested, the progress of the disease. For the rest, it is evident that a distinction must be drawn between those phthisical patients who have retained their appetite, and those who, on the contrary, are suffering from protracted vomiting and aversion to food. In such cases striking results are recorded, anorexia giving place to appetite, sweating ceasing, and sleep returning. In some patients an increase in weight immediately occurs, amounting to as much as from eighty to one hundred grammes a day; at the same time the daily weight of urea increases from eighteen and twenty grammes to fifty, sixty, often eighty grammes. Thus may be noted the fabulous activity which super-alimentation impresses on the organic changes and the phenomena of combustion, and it is possible one may conceive from this fact that the ground is modified on which the disease is evolving.

"The pulmonary symptoms undergo no less important modifications; in such cases the cough and expectoration diminish, says M. Debove, and then disappear. The stethoscopic sounds of the bronchial tubes follow the same retrogressive course; the signs of pulmonary induration on the caverns seem to persist; but, in one case, first observed by M. Debove, in which death supervened accidentally from a traumatic injury, and in which post-mortem examination was made three and a half months after the commencement of the treatment, the walls of the cavern were found to be lined with healthy granulations, and the lesions in course of repair."

◆

THE TREATMENT OF CARIES IN THE CERVICAL VERTEBRÆ.

IN the *New York Medical Journal* for October, Dr. Roberts discusses the now prevalent treatment of Pott's disease according to the Sayre method. He points out that the percentage of recoveries is greater in cases where the disease is above the level of the axillæ, and is therefore treated by the jury mast, than in caries of the lower dorsal and lumbar vertebræ where the plaster jacket alone is used. He further claims that the method of Sayre is essentially different in its action in the two cases. Below the axillæ it is, as described by its author, an extension of the diseased structures, with nearly complete fixation, the aim being of course anchylosis. When, however, the jury-mast is used, there is fixation of the healthy vertebræ only, and the elasticity of the metal rod keeps the cervical vertebræ in a condition of elastic extension, so that the diseased surfaces are kept from irritating each other, but are allowed to move with the effort of the patient. This he believes to be the true theory of treatment, and the facility with which it is applied in case of cervical disease accounts for the better results in such cases. It is in like manner, however, a desideratum for all cases of Pott's disease. The fixation by means of a plaster jacket is not desirable, but because it seems to be the only way to get a good foundation for the jury-mast, must at present be tolerated. Indeed it can better be afforded over vertebræ which are healthy than over those which are diseased. The elastic tension desired for the cervical vertebræ can be still further secured by substituting elastic bands for the unyielding ones used by Sayre. The writer claims that cases so treated recover quicker and *without anchylosis*, so that the movements of the head and neck are as free as ever. The *point d'appui* of the supporting apparatus should not be (as according to Sayre) from one point at the back of the jacket, but the ends of the support should be carried forward around the sides of the chest so as to bring the bearing more nearly under the centre of gravity. Finally, the jury-mast being altogether a conspicuous and awkward affair should be substituted by a mento-occipital cushion carried on springs from a frame inserted in plaster, so as to secure the same elastic tension, without any curved rod passing over the head.

Since this article was written Dr. Roberts has read a paper before one of the local societies in New York, in which he describes the successful application of this theory to the treatment of dorsal caries. A jacket is applied, and then divided horizontally over the seat of the disease, the upper and lower segments of the spinal column being kept apart by elastic tension secured by strong spiral springs having their ends embedded in the plaster. The lower portion of the jacket takes support from the crests of the ilia, and the upper from the occiput or the thorax, according to circumstances.

◆

ANOTHER "EXPERT" WITNESS.

The *Australasian Medical Gazette* shows some just indignation regarding an action of tort brought against a reputable and qualified practitioner in Australia, in which a man and wife claimed £3000 for unskillful treatment of the latter during labor. It was a difficult and protracted case, necessitating the use of forceps, and was followed by puerperal fever and phlegmasia dolens, through which the physician seems to have given wise and intelligent care. Finally, when she was convalescing, a Dr. Marshall, "M. D., of the College of Medicine and Surgery, Cincinnati, U. S. A.," visited the patient. This man was an admitted professional rival of the former practitioner, and was proved to be the instigator of the suit. As the only witness in support of the claimants at the trial he favored the court with some very remarkable evidence. He diagnosticated the case when "called" to it as *uræmia*, and from a microscopical examination of the blood determined that the white corpuscles equaled in amount one third of the red. From the ankles he obtained a watery serum containing (likewise determined by the microscope) crystals of uric acid, and the presence of urine in this situation was explained on the ground that it had "dropped down into the legs." The evidence of this practitioner was altogether unreliable, and displayed such ignorance that there could be no question of his professional incompetency. On the other side ample and unimpeachable testimony, supplied by highly qualified medical men, gave indisputable evidence of the skill with which the plaintiff had been treated; and the case naturally ended to the satisfaction of professional honor.

◆

THE DIGESTIVE POWER OF COMMERCIAL PEPSIN.

Dr. C. L. Dana presents in the *American Journal of the Medical Sciences* for October the results of a series of experiments upon this point. They were made with various preparations and under different conditions as to the substance digested, the degree of dilution, of acidity, etc. Among the conclusions reached, from the results in an artificial menstruum outside the stomach, were the following: —

(1.) That only slight results can be gotten from pepsins unless every precaution is carried out. (2.) That the different pepsins have different values. (3.) That lacto-peptin and the so-called essences and elixirs of pepsin are feeble preparations. The author further concludes that ten grains of ordinary commercial pepsin will generally digest ten or twelve times its own weight of coagulated egg-albumen, finely minced, in four to six hours. It has, however, very little effect upon lumps of albumen or upon boluses of lean or cooked meat.

This is the case outside the stomach. If it does no better when given medicinally, or even if it does considerably better, its power as a remedy must be very slight.

Physiological investigations upon dogs gave more favorable results. From them Dr. Dana says in conclusion: "A physician in giving a dose of *good* pepsin may believe that it will have a value two or three times greater than that exhibited under ordinary artificial conditions, that is, it will digest twenty or thirty times its own weight. This conclusion is in harmony with much clinical experience, that *good* pepsin has a *real* though not a *great* medicinal value.

"Points of practical importance are, that large doses should be given, even of so-called pure pepsins. The physician should always know how much pure pepsin there is in the saccharated preparations. Acid should generally be given immediately before, and the pepsin after, meals."

◆

BOSTON DISPENSARY.

The statistics of this institution for the year ending September 30, 1882, are as follows: The number of new patients treated at the central office is 14,742, classified as follows: Medical Department, men, 2348; women, 4712; children, 2452; total, 9510. Surgical Department, men, 1320; women, 500; children, 382; total, 2202. Dental Department, men, 247; women, 391.; children, 484; total, 1122. Skin Department, men, 700; women, 269; children, 153; total, 1122. Department for Diseases of the Nervous System, men, 16; women, 12; children, 5; total, 33. Department for Diseases of the Throat and Nose, men, 278; women, 303; children, 172; total, 753. The number of visits made by patients, old and new, at the central office, is 26,954, classified as follows: —

Medical, 17,302; surgical, 9652; total, 26,954.

The number of new patients treated in the districts is 11,436, including 201 cases of midwifery, classified as follows men, 2164; women, 4610; children, 4662; total, 11,436.

Number of new patients treated in the central office and in the districts	26,178
Number of cases of midwifery attended during the year	201
Number of cases of midwifery attended since July, 1858	3,867
Whole number of patients since October, 1796	814,415
Whole number of patients since July, 1856	693,612
Average daily attendance at the central office during the year	88
Largest number present any one day, May 8	200
Smallest number present any one day, January 27	27
Number of recipes put up at the central office during the year	32,080
Number of house recipes	24,510
Number of district recipes	7,570
Largest number put up in one day, May 8	211
Smallest number put up in one day, November 12	51
Number of paid recipes	30,061
Number of free recipes	2,019

Surgeons: Thomas Waterman, M. D., Charles E. Inches, M. D., J. Foster Bush, M. D., Francis H. Williams, M. D.

Physicians: Robert Disbrow, M. D., Josiah L. Hale, M. D., Joseph P. Oliver, M. D., Robert M. Lawrence, M. D., John Dixwell, M. D., Thomas M. Rotch, M. D., Claudius M. Jones, M. D., Henry C. Haven, M. D., Henry W. Broughton, M. D. Harold Williams, M. D., James J. Minot, M. D., George M. Garland, M. D., Edward M. Buckingham, M. D., Henry L. Morse, M. D., John B. Swift, M. D. Department for Diseases of the Nervous System, Frederick W. Vogel, M. D., Morton Prince, M. D. Department for Diseases of the Skin, Francis B. Greenough, M. D., Abner Post, M. D. Department for Diseases of the Throat and Nose, Thomas A. DeBlois, M. D., John W. Farlow, M. D. Department for Diseases of Women, William H. Baker, M. D., Francis H. Davenport, M. D., Charles M. Green, M. D., John W. Elliot, M. D. Department for Diseases of the Eye, Charles H. Williams, M. D. Department for Diseases of the Ear, Frank H. Hooper, M. D. Department for Diseases of the Genito-Urinary System, George H. Tilden, M. D., Francis S. Watson, M. D. Dental Department, Frederick E. Banfield, D. M. D.

District Physicians: No. 1, George W. Copeland, M. D. No. 2, William N. Bullard, M. D. No. 3, William C. Emerson, M. D. No. 4, Samuel J. Mixter, M. D. No. 5, Robert B. Dixon, M. D. No. 6, Walter J. Otis, M. D. No. 7, Vincent J. Bowditch, M. D. No. 8, Flavill W. Kyle, M. D. No. 9, Frederick F. Doggett, M. D. Apothecary: Frank H. Clark; assistant apothecary, Robert Nixon.

WILLIAM H. H. HASTINGS, M. D., superintendent.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 7, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	594	229	26.58	10.20	2.87	2.51	3.67
Philadelphia	846,984	353	125	16.41	2.83	—	2.55	11.04
Brooklyn	566,689	238	104	23.53	9.66	10.50	1.26	4.20
Chicago	503,304	197	89	35.43	7.11	12.18	11.67	7.61
Boston	362,535	168	54	28.20	8.40	14.40	5.40	6.00
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	179	80	36.05	5.32	4.14	2.96	17.14
Cincinnati	255,708	91	41	27.45	5.49	8 78	1.10	3.29
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	60	26	28.00	12.66	5.00	12.66	10.00
Buffalo	155,137	84	42	—	—	—	—	—
Milwaukee	115,578	53	34	35.85	3.77	20.75	1.89	7.55
Providence	104,857	—	—	—	—	—	—	—
New Haven	62,882	22	9	22.73	4.54	18.18	—	—
Charleston	49,999	31	8	12.90	—	12.90	—	—
Nashville	43,461	19	7	26.31	11.53	15.79	—	—
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	21	12	47.61	9.52	23.81	19.04	4.76
Cambridge	52,740	19	8	26.31	5.26	15.79	—	11.53
Fall River	49,006	23	9	39.06	4.34	21.70	17.36	—
Lawrence	39,178	17	5	64.70	—	23.53	17.65	11.77
Lynn	38,284	16	5	12.50	—	6.25	6.25	—
Springfield	33,340	9	1	22.22	—	11.11	—	—
Salem	27,598	9	1	11.11	—	—	11.11	—
New Bedford	26,875	6	1	—	16.66	—	—	—
Somerville	24,985	5	3	20.00	—	20.00	—	—
Holyoke	21,851	10	4	40.00	—	—	40.00	—
Chelsea	21,785	12	6	16.66	—	8.33	8.33	—
Taunton	21,213	5	1	20.00	—	—	20.00	—
Gloucester	19,329	3	2	66.66	—	66.66	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	2	0	50.00	—	—	50.00	—
Newburyport	13,537	5	2	20.00	—	20.00	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	2	0	—	—	—	—	—
Eighteen Massachusetts towns	141,413	57	25	10.52	5.26	5.26	—	—

Deaths reported 2310 (no reports from St. Louis, New Orleans, District of Columbia, and Providence): under five years of age 933: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 584, consumption 336, lung diseases 157, diarrhœal diseases 217, diphtheria and croup 143, typhoid fever 94, scarlet fever 33, puerperal fever 29, small-pox 16, whooping-cough 16, malarial fevers 14, measles 10, cerebro-spinal meningitis nine, erysipelas three. From *scarlet fever*, Cincinnati 10, New York five, Philadelphia and Brooklyn four each, Baltimore three each, Chicago, Boston, and Spencer two each, Nashville one. From *puerperal fever*, New York 24, Chicago and Boston two each, Philadelphia one. From *small-pox*, Baltimore 11, Philadelphia four, Cincinnati one. From *whooping-cough*, New York nine, Brooklyn two, Philadelphia, Chicago, Cincinnati, Milwaukee, and New Haven one each. From *malarial fevers*, Brooklyn 11, Baltimore, Cincinnati, and Nashville one each. From *measles*, New York and Baltimore five each. From *cerebro-spinal meningitis*, Chicago, Milwaukee, and Lawrence two each, New York Springfield, and Peabody one each. From *erysipelas*, New York, Brooklyn, and Chicago one each.

Sixty-five cases of small-pox were reported in Baltimore, Cincinnati five, Lawrence one; typhoid fever 49, diphtheria 27, scarlet fever five, in Boston; scarlet fever 17, diphtheria four, in Milwaukee.

In 35 cities and towns of Massachusetts, with a population of 977,589 (population of the State 1,783,086), the total death-rate for the week was 20.32 against 21.17 and 23.64, for the previous two weeks.

For the week ending September 16th, in 169 German cities and towns, with an estimated population of 8,492,713, the death-rate was 23.9. Deaths reported 3910: under five years of age 2134; consumption 473, diarrhœal diseases 289, lung diseases 284, diphtheria and croup 180, scarlet fever 103, typhoid fever 68, whooping-cough 67, measles and rötheln 27, puerperal fever 18, typhus fever (Düsseldorf two, Braunschweig one) three, small-pox (Breslau one) one. The death-rates ranged from 9.0 in Weisbaden to 49.2 in München-Gladbach; Königsberg 29.4; Breslau 30.2; Munich 22.7; Dresden 27.3; Berlin 26.7; Leipzig 20.0; Hamburg 22.5; Cologne 28.3; Frankfort a. M. 18.9; Strasburg 19.5.

In the 28 English towns, with an estimated population of

8,469,571, for the week ending September 23d, the death-rate was 20.8. Deaths reported 3374: acute diseases of the respiratory organs (London) 263, diarrhœa 270, scarlet fever 100, whooping-cough 64; fevers 50, measles 44, diphtheria 24, small-pox (Nottingham two, Newcastle five) seven. The death-rates ranged from 11.4 in Brighton to 28.5 in Sunderland; Birkenhead 17.5; London 19.4; Bradford 21.9; Birmingham 22.2; Hull 24.3; Liverpool 25.2; Preston 26.2; Nottingham 27.5. In Edinburgh 18; Glasgow 20.1; Dublin 26.1.

For the week ending September 23d, in the Swiss towns, population 494,390, there were 36 deaths from consumption, diarrhœal diseases 28, lung diseases 10, diphtheria and croup six, typhoid fever six. The death-rates were, at Geneva 13.4; Zurich 14.2; Basle 17.9; Berne 25.3.

The meteorological record for the week ending October 7th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
October, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 1	30.090	61	70	53	81	62	64	69	NW	N	NW	11	1	12	F	C	C	—	—
Mon., 2	30.172	58	70	50	70	34	71	58	NW	NW	NW	9	14	12	C	F	F	—	—
Tues., 3	30.244	51	64	43	76	41	86	68	NW	W	W	4	6	8	O	C	C	—	—
Wed., 4	30.232	55	69	40	80	26	62	56	W	W	NW	7	12	5	C	C	C	—	—
Thurs., 5	30.342	55	62	52	62	61	72	65	NW	SE	SE	3	8	4	O	F	O	—	—[2]
Fri., 6	30.396	56	64	50	78	48	76	67	SE	SW	S	6	9	6	O	O	O	—	—
Sat., 7	30.147	61	71	53	89	74	87	83	S	SW	SW	8	13	8	O	O	C	—	—
Means, the week.	30.232	57	71	40				67										0.35	—[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

[2] Too small to measure.

Correction. — The dinner of the Massachusetts Medical Benevolent Society will take place Thursday, October 26th, and not October 27th, as announced in the editorial of the Journal last week.

American Academy of Medicine. — The seventh annual meeting of the American Academy of Medicine will be held in the Hall of the College of Physicians, Thirteenth and Locust Streets, Philadelphia, on Thursday, October 26th, at three o'clock P. M. Richard J. Dunglison, *Secretary*.

Books and Pamphlets Received. — The Application of Pressure in Diseases of the Uterus, Ovaries, and Peri-Uterine Structures. By V. H. Taliaferro, M. D., Atlanta, Ga. (Reprint.) 1882.

Woman's Medical College of the New York Infirmary. Fourteenth Annual Announcement. 1882.

On the Continuous Inhalation of the Vapor of Slacking Lime in the Treatment of Membranous Laryngitis. By Eugene F. Cordell, M. D.

Transactions Mississippi State Medical Association. Oxford, April, 1882.

Microscopical Morphology of the Animal Body in Health and Disease. By C. Heitzmann, M. D., late Lecturer on Morbid Anatomy at the University of Vienna, Austria. New York; J. H. Vail & Co. 1883.

The Diseases of the Rectum, including Fistula, Hæmorrhoids, Painful Ulcer, Stricture, Prolapsus, etc., with Diagnosis and Treatment. By William Allingham, M. D., F. R. C. S. Fourth Revised and Enlarged Edition, with Illustrations. Philadelphia: P. Blakiston, Son & Co. 1882.

The Guiteau Autopsy. Reprint of Editorial from the American Journal of Neurology. New York. 1882.

Is Gelsemic Acid identical with Æsculin? By Theodore G. Wormley, M. D. (Reprint.)

A Practical Laboratory Course in Medical Chemistry. By John C. Draper, M. D., LL. D. New York: William Wood & Co., 1882.

The Physician Himself and What he should add to his Scientific Acquirements. By D. W. Cathell, M. D. Second Edition. Baltimore. 1882.

The Treatment of Diseases by the Hypodermatic Method. By Roberts Bartholow, M. A., M. D., LL. D. Fourth Edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1882.

Stricture of the Rectum treated by Electrolysis. By Robert Newman, M. D., New York. (Reprint.)

Nitro-Glycerine in Angina Pectoris. By William Murrell, M. D., M. R. C. P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital, etc. Detroit: George S. Davis. 1882.

Report of the Commissioner of Education for the Year 1880. Washington: Government Printing Office. 1882.

Twenty-Eighth Annual Report of the State Commissioner of Common Schools to the General Assembly of the State of Ohio for the School Year ending August 31, 1881. Columbus. 1882.

Cases of Pericarditis with Effusion. By J. Hamilton Mackechnie, M. D., Physician to the London Homœopathic Hospital.

Abortive Treatment of Mammary Abscess and the Cure of Fissured Nipples by Means of a New and Effectual Compress. By George H. Noble, M. D., Atlanta, Ga. (Reprint.)

Sixth Annual Report of the State Board of Health of Wisconsin, 1881. Madison. 1882.

A System of Human Anatomy. Including its Medical and Surgical Relations. By Harrison Allen, M. D., Professor of Physiology in the University of Pennsylvania, etc. Illustrated with Three Hundred and Eighty Figures, on One Hundred and Nine Plates. The Drawings by Hermann Faber from Dissections by the Author. Section I. Histology, by E. O. Shakespeare, M. D. Section II. Bones and Joints. Philadelphia: Henry C. Lea's Son & Co. 1882.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology, with especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M. D. Fourth Edition, Revised and Enlarged. Philadelphia: J. B. Lippincott & Co. 1882.

Speech and its Defects, considered Physiologically, Pathologically, Historically, and Remedially. By Samuel I. L. Potter, M. A., M. D. Lea Prize Thesis of Jefferson Medical College. Philadelphia: P. Blakiston, Son & Co. 1882.

Transactions of the Brighton Health Congress, 1881. President, Benjamin Ward Richardson, M. D., LL. D., F. R. S. With Authentic Portraits, Maps, and Illustrative Diagrams. London: E. Marlborough & Co. Brighton: John Beal & Co.

A Point in the Management of the First Stage of Labor. By Walter R. Gillette, M. D., New York. (Reprint.)

The Female Perinæum. By T. G. Comstock, M. D., Master in Obstetrics of the University of Vienna. St. Louis. (Reprint.)

The First Biennial Report of the Michigan Free Eye and Ear Infirmary and Eye and Ear Department of the Michigan College Hospital. Detroit. 1882.

Original Articles.

FORTIETH REGISTRATION REPORT.[1]

BY C. F. FOLSOM, M. D.

THE average annual rate of increase in the population of Massachusetts from 1870 to 1875 was 2.538 per cent. From 1875 to 1880 it was 1.55 per cent., estimated to have been unevenly distributed over the five years as follows: 0.000, 0.324, 0.599, 2.999, 3.835. In the three census years 1870, 1875, and 1880 the average of the ratios of the population to the assessed polls was 3.98. Calculating from the assessed polls of 1881 (469,207), the population for that year, upon the same basis, would be 1,867,444.

In the year 1881 there were recorded 45,220 births, 16,768 marriages, and 36,458 deaths; or 1003 more births, 1230 more marriages, and 1166 more deaths than in the previous year. The excess of living births over deaths was 8762, showing a natural increase of births over deaths amounting to 163 less than in 1880. The approximate rates for the year are: births 24.21, marriages 8.98, deaths 19.52, excess of births 4.69, to 1000 of estimated population, and for a period of years, as shown by the following table:—

	Marriages to 1000 Persons.	Births to 1000 Persons.	Deaths to 1000 Persons.	Excess of Birth-rate over Death-rate.
5 years ending 1855	11.7	28.8	18.7	10.1
5 years ending 1860	9.8	29.5	17.9	11.6
5 years ending 1865	9.3	25.4	20.7	4.7[1]
5 years ending 1870	10.5	26.1	18.2	7.9
5 years ending 1875	9.9	27.6	20.8	6.8
5 years ending 1880	8.0	24.8	19.2	5.6
30 years ending 1880	9.9	27.0	19.3	7.8

[1] 8.3, excluding the three years most influenced by the war.

The highest birth-rates are in those parts of the State where there are most foreigners, who constitute mostly the laboring class; 26.6 per cent. of the births were in the third quarter of the year, 25.3 in the fourth, 24.1 in the second, 24.0 in the first. There were born 104.3 males to 100 females. Of the 801 illegitimate births 432 were in Suffolk County. There were 389 twin births and nine cases of triplets. There were 1466 still births.

The last ten years show an increase of nearly two thirds in the percentage of births of mixed parentage; that of the births of native-born parents has slightly increased, and the diminution is quite striking in the percentage of births of foreign parents. In a third of a century the decrease in births of natives has been very marked, while the increase in those of foreign parents apparently reached its height ten years ago, and the mixture of races is still becoming more prominent from year to year.

In the last quarter of the year 31.44 per cent. of the marriages occurred; in the second 25.62; in the third 22.17; in the first 20.77. The average age of men at marriage was 28.8 years; of women 25.1; of men marrying for the first time 26.5; of women marrying for the first time 23.9.

The number of deaths in 1881 exceeded the mortality of the previous year by 1166, and was the greatest recorded in the State. The death-rate per 1000 of the living population was slightly (.27) less than for the previous year, but .30 per 1000 greater than the average of the previous five years, and .26 greater than the average for the preceding thirty years. It was exceeded only nine times since 1850. The deaths under one year of age exceeded those of 1880 by 199, whereas there were 1003 more births in 1881 than in 1880. The year was one, therefore, of a little less than average health. The threatened epidemic of small-pox was warded off by careful vaccination and revaccination, and the other infectious diseases were not in excess of the previous few years.

Sex.—The deaths of females exceeded those of males in 1881 by 149, a much smaller difference than has obtained since 1874. In fifteen deaths the sex was not reported. The ratio of females to males in the population, by the census of 1880, was 107.71. The excess of females over males was 66,205 as compared with 32,301 in 1855. The death-rate of males, for the five census years, 1860–1880, exceeded that of females by 1.2 per 1000.

Of the 36,458 deaths, 7389 were of infants under one year of age, 11,970 of children under 5. The average death-rate for ten years per 1000 living at the several ages was 200.19 under 1; 67.96 under 5; 8.86 from 5 to 10; 4.38 from 10 to 15; 7.34 from 15 to 20; 10.33 from 20 to 30; 10.74 from 30 to 40; 12.12 from 40 to 50; 17.62 from 50 to 60; 33.27 from 60 to 70; 72.77 from 70 to 80; 176.24 over 80. The average age at death in 1881 was 33.07 years.

The distribution of diseases by classes shows a decrease in "zymotic" and increase in local diseases as compared with 1880, but otherwise little change. From the "zymotic" or infection diseases, the proportion for 1881 was 1.5 less than for 1880, and 3.8 less than the average for ten years. From constitutional diseases it was very near the average, and .6 more than in 1880. The local diseases were 5.1 higher than the average, and only .2 higher than for the previous year. Developmental diseases, although 1.4 less than the ten years' average, were .5 higher than for 1880. Violent deaths were .2 below the average, and .2 below the proportion of the previous year.

The progressive increase in typhoid fever from 1879 has continued in spite of improved drainage and introduction of pure drinking water. The advance in the mortality from typhoid fever was much more rapid in the three years, 1879–1881, than was the decline in the previous three years, 1876–1878. The other infection diseases caused fewer deaths than in 1880, the decline being most marked in scarlet fever, which was the least fatal in 1881 of all the years since 1871. Diphtheria (with croup) caused only eleven deaths less than in 1880, and is in its seventh year of excessive prevalence.

From 1857 to 1880 the mortality rate from cancer more than doubled, while from consumption there was a diminution of nearly twenty-five per cent. In 1881 there were 949 deaths from cancer, and 5886 from consumption, as compared with 242 and 4625 in 1857, and with 928 and 5494 in 1880.

The principal *local diseases* still show an increase in numbers of deaths, which has been almost steadily progressing in the ten years.

---

[1] Fortieth Report to the Legislature of Massachusetts relating to the Registry and Return of Births, Marriages, and Deaths in the Commonwealth for the Year ending December 31, 1881. Prepared under the direction of the Secretary of the Commonwealth. Boston: Wright & Potter Printing Company, State Printers. 1882.

In *developmental diseases* the prevalence of puerperal fever is marked, and there is a striking decrease in the deaths ascribed to childbirth, but the two together caused 205 deaths in 1881 as compared with 211 in 1880.

Violent deaths show a decided diminution in deaths by homicide, and a great increase over the previous year from suicide. The railroad accidents were by far the most of any year in the decade.

Pulmonary consumption is, as usual, by far the most fatal of all the diseases. Pneumonia is next, as it was in 1874, 1875, 1878, 1879, and 1880, being third in 1872, 1873, 1876, and 1877. Heart disease — sometimes a vague term — is third, in place of occupying a lower place from fourth to eighth in the previous nine years. Cholera infantum fell steadily from the second place in 1872 and 1873 to the sixth in 1879, was third in 1880, and is in 1881 fourth. Old age, fifth in order, was sixth in 1880 and fourth or fifth from 1872 until then. Diphtheria was second in 1876 and 1877, third in 1878 and 1879, fifth in 1880, and is now sixth. Typhoid fever, after having fallen from the fourth place in 1872 to the thirteenth in 1879, was tenth in 1880, and this year is seventh. Cephalitis was tenth in 1879 and ninth in 1880; this year eighth. Paralysis, for the previous four years, seventh. Cancer was eighth in 1880 and 1879; previously from tenth to twelfth. Bronchitis has been eleventh for three years. The twelve leading causes of death constituted 59.98 per cent. of the mortality for the year, as compared with 59.8 in 1880.

A table of prevalence of typhoid fever in the several towns for ten years shows the average annual death-rate per 1000 living to have been in the State 6.37; in Boston, 5.55; in four towns of 40,000 to 50,000 population, 6.28; in three, of 30,000 to 40,000, 8.13; in five, of 20,000 to 30,000, 5.36; in twelve, of 10,000 to 20,000, 6.43; in thirty, of 5000 to 10,000, 5.19; in twenty-three, of 4000 to 5000, 6.51; in thirty-three, of 3000 to 4000, 7.42; in forty-nine, of 2000 to 3,000, 6.63; in ninety-eight, of 1000 to 2000, 6.20; in eighty-three, of less than 1000, 7.11.

The report will be ready at the State House in a few weeks for free distribution.

◆

PUERPERAL SEPTICÆMIA AND LOCALIZED PERITONITIS.[1]

BY DR. J. H. NICHOLS, CAMBRIDGE.

The case which I report to the Society to-night is one of puerperal septicæmia and localized peritonitis, with a large sero-purulent effusion, limited by adhesions, discharging through the umbilicus, complicated with catarrhal pneumonia and double milk leg; ending in recovery.

Mrs. L., twenty-five years old, had always been well before the present attack. She had been married three years, and had given birth to one child, her confinement having been natural. Her second child was born at 11.30 P. M., January 22, 1881. The midwife who attended her reported the labor a short and natural one. At nine P. M. of the 23d, less than twenty-four hours after delivery, she had a severe rigor, followed by fever, headache, vomiting, and pain in the lower part of the abdomen. During the 24th, the second day of the disease, the fever and pain continued, and she had diarrhœa. I saw her on the third day. She had a second chill, less severe than the first, two hours before my visit; the skin was hot and moist, the tongue furred, the headache severe; there were frequent light-colored, very offensive dejections, and occasional vomiting; there was much thirst; the pain in the abdomen was referred chiefly to the right iliac region, where the tenderness was also most marked; the abdomen was moderately tympanitic, and moved fairly well in respiration; the uterus was firmly contracted, and was not very tender on pressure; the lochial discharge was scanty, of natural color and odor; there were no clots in the vagina; the pulse was 130; respirations 36; temperature 102° F. On the fourth day all the symptoms were less severe; there had been profuse sweating during the night; pulse 96; respirations 24; temperature 99° F.

Fifth day. Was slightly delirious in the night, and the pain and diarrhœa were worse. At 10.30 A. M. she had a severe rigor; when seen an hour later, the face was pale and pinched; the skin hot and dry; pulse 120; respirations 36; temperature 104° F.; she had vomited several times. In the evening, pulse 130; respirations 36; temperature 102⅖° F.; the lochial discharge was pale and somewhat offensive in odor.

Sixth day. Delirious in the night, and had profuse sweating; no dejection; the pain and tenderness of the abdomen continued, and there was fullness and a feeling of resistance on palpation in the right iliac region. A. M. Pulse 130; respirations 36; temperature 103⅖° F. P. M. These figures were the same; the tongue was dry and brown.

Seventh day. Had a good night. A. M. Pulse 112; respirations 24; temperature 101⅗° F. P. M. Pulse 120; respirations 28; temperature 101⅖° F.; no dejection.

Eighth day, A. M. Pulse 120; respirations 28; temperature 101⅗° F. P. M. Record was the same; the lochial flow was less offensive, and of a brighter color; two large loose dejections. There has been no secretion of milk.

Ninth day, A. M. Pulse 112; respirations 26; temperature 100⅕° F. P. M. Pulse 120; respirations 26; temperature 101⅕° F.; no dejection.

Tenth day. For three or four days has had a slight cough, which to-day is worse, with scanty, thin, frothy expectoration, not tinged with blood; the lower half of the right back was slightly dull on percussion, and coarse moist râles were heard there. A. M. Pulse 120; respirations 28; temperature 101⅘° F. P. M. Pulse 120; respirations 26; temperature 102° F.; no dejection.

Twelfth day. Profuse sweating during sleep; the mouth was sore, and there was an eruption of herpes about the nose and lips; the cough was worse, and the expectoration thicker; the dullness on percussion over the right base was more marked; the vocal resonance and thrill increased, and the coarse râles still present.

Thirteenth day. Mouth very sore; fauces red and covered with a sticky mucus; tongue red and dry; pulse 120; respirations 28; temperature 102° F.

Fifteenth day. Rectum packed with hardened fæces; after clearing out this accumulation the vagina was found to be cool and moist; the lochial flow had ceased; the os was patulous, the sound entering four inches; the uterus was low down in the pelvis, and pushed a little to the left; its motion was limited, but it was not so firmly fixed as it often is in pelvic inflammation; there was tenderness and some fullness, with indistinct fluctuation in the upper part of the vagina, but no masses of exudation could be felt.

---

[1] Read before the Boston Society for Medical Observation, February 20, 1882.

From this time the progress of the case was so gradual that it is not worth while to take up your time with the daily record. The abdominal pain and tenderness continued, always being most marked on the right side. The decubitus was always on the right side, motion increasing the pain. The right thigh could be moved without suffering. The abdomen steadily enlarged, the swelling being most prominent on the right side. About the fourteenth day fluctuation was detected, becoming more marked as the enlargement increased, until a distinct wave could be felt. The line of dullness which corresponded with the outline of the swelling did not change with position. Tympanites was not very marked, and the respiration was never entirely thoracic. The disease in the right lung continued, clearing up very slowly during convalescence. Moist râles were always present, bronchial respiration being never well marked. The expectoration was muco-purulent, not bloody, moderate in amount, and had no offensive odor.

On the twenty-second day pain and tenderness were complained of in the calf of the left leg. Swelling soon appeared, extending up the thigh, and involving the vulva of that side. It presented all the appearances of milk leg. A lesser degree of the same condition affected the right leg, but did not extend above the knee. This complication ran its usual course, the swelling subsiding very slowly, causing trouble in walking for a long time.

The general condition of the patient was very bad. The hectic condition was very marked, and profuse sweating was a prominent symptom. The pulse was always rapid, and the temperature ranged from normal to 103° F., with an evening rise. There were no distinct rigors, excepting those already mentioned. There was no appetite, even liquid nourishment being taken with reluctance. Emaciation was marked. There was occasional vomiting and frequent attacks of diarrhœa, generally of but a few hours' duration.

The urine was scanty and high colored and did not contain albumen. There was no dysuria.

With the exception of slight delirium in the early part of the case the mind was clear.

On February 19th, the twenty-eighth day of the disease, the line of dullness and of fluctuation in the abdomen extended from the right iliac region to the crest of the left ilium; thence upward and inward to about an inch above the umbilicus; thence to the right, downwards and outwards, to the right iliac region. The No. 2 needle of Dieulafoy's aspirator was inserted just above the level of the anterior-superior spine of the right ilium, and an inch to the right of the median line. Forty-eight ounces of a thin turbid fluid were drawn off. On standing a thin layer of pus settled to the bottom of the vessel, leaving a pretty clear fluid, which had a specific gravity of 1016, — neutral to test paper, — becoming almost solid with heat or nitric acid. The sac was but partially emptied, the needle becoming plugged by a flake of lymph. The area of dullness was decidedly, though irregularly, lessened, especially at the upper part of the abdomen. After this operation a line of induration, perhaps a quarter of an inch wide, could be felt at the edges of the swelling in some places. The pain was somewhat lessened after aspiration, but the general condition of the patient did not improve. On the thirty-second day the sac was again aspirated, and twenty-four ounces of a more decidedly purulent fluid were drawn off. Not long after the skin about the umbilicus became red and swollen, and a fluctuating swelling gradually pushed out of the navel. On the fiftieth day the patient was etherized and this swelling was laid open. A small opening was found through the abdominal wall. This was enlarged, and a large quantity of thin, curdy pus was discharged. It had no offensive odor. A rubber drainage-tube was inserted. On the following day the patient had no pain, and the general condition seemed rather better. The discharge was large, the pus thicker, but the odor had become very offensive. An elastic catheter was passed into the sac, and the cavity washed out with a weak solution of carbolic acid (two drachms of the five per cent. solution to a pint). Though this was done with the utmost care, it gave great pain, which lasted several hours. The pulse was quickened, the feet and hands became cold, and the face pinched. This injection was repeated four times, using a double catheter, and substituting a solution of permanganate of potash for the carbolic acid. Once warm water alone was used. Every time great pain and prostration followed the washing out of the sac. For a few hours after the washing the odor was lessened and the discharge less abundant. It was evident that this treatment was doing more harm than good, and it was therefore abandoned. From this time the general condition began to improve. The pain disappeared, and the patient could turn in bed without suffering. The discharge continued free, the abdomen slowly reducing in size. The fetor was in a measure concealed by charcoal poultices. The patient got much comfort from a firmly-applied swathe. Two weeks after the opening of the sac the discharge had nearly ceased, and the drainage-tube was removed. In a day or two after there was a return of pain, with considerable fever. A director was passed into the opening, and a free discharge of pus followed, with relief to these symptoms. After this there was no obstruction to the discharge, which gradually lessened and lost its fetid odor. The opening finally closed about the eightieth day. She was able to leave her chamber on the one hundredth day from the commencement of the attack.

The patient is now nearly as well as ever. She has no symptom of trouble in the abdominal cavity, is in good flesh, and of good color. She thinks she cannot endure as much as she formerly could.

The hygienic surroundings of the patient were unfavorable. Her room was small and did not get much direct sunlight. The severity of the weather prevented effectual ventilation by open windows, the only method available. Although everything essential in the way of food and stimulants was provided, the nursing of the patient had to be intrusted to her family. The only drugs given were quinine and opiates, in sufficient doses to relieve pain. Stimulants were given freely. In the early stages counter-irritation was used, and once a large blister was applied to the abdomen. A temporary relief of pain was the only apparent result of this application.

The effect of washing out the cavity of the abscess seems to me an interesting feature of this case. It offers a striking contrast to the good results claimed from washing out the cavity of the chest in empyema. The intense fetor and the bubbles of air, blackening silver instruments, which freely escaped from the opening, showed that there was decomposition of the contents of the sac, and an attempt at disinfection seemed to be proper. But each time the attempt was made a condition like shock resulted, and the patient grew worse, until the injections were discontinued, when she began steadily to improve.

As the opening of an abscess of this character at the umbilicus is, I believe, rather unusual, I will very briefly give the outlines of a case seen by me in consultation.

Mrs. B., twenty-seven years old, six months advanced in her first pregnancy, had an attack of pain in the right iliac region, with fever. The symptoms subsided in a few days, and she left her bed, though there was still some pain on motion. A week later the fever and pain returned, and in a few days labor came on and terminated naturally. The fever, pain, and tenderness of the abdomen continued. Three weeks after delivery I was asked to see her, on account of an attack of pneumonia of the right lung. There was swelling of the abdomen, most marked on the right side, with distinct fluctuation. I did not see her again, but was informed by her physician that the lung partially cleared up; that the hectic condition became marked; the skin about the umbilicus became red; and that thin, curdy pus was discharged from the umbilicus in small quantity a few days before her death, which took place three weeks after my visit. The opening was not enlarged. No autopsy was made.

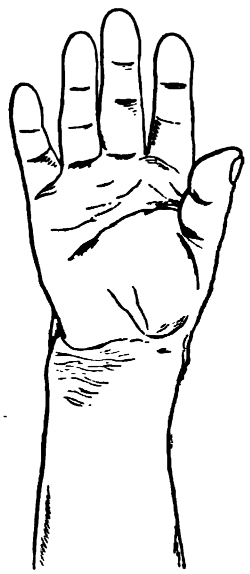
EXCISION OF THE WRIST-JOINT.[1]

BY J. COLLINS WARREN, M. D.

THIS operation has always been unpopular with surgeons; the results have not been nearly as satisfactory as excision in almost any other joint, considerable displacement and impairment of motion in the various articulations interfering greatly with the use of the hand. Professor Lister has devised a method intended to avoid any great injury to the tendons or vessels, and it has received general commendation, although we find Holmes saying in his System of Surgery that it is a most tedious and difficult operation. The difficulty in following out an operation based on nice anatomical distinctions is great either in injury or disease, both of which compel modifications of a theoretical plan in order to adapt it to the conditions of any particular case.

The method carried out in all but one of the following cases consisted in lateral incisions made sufficiently far back on the side of the wrist to avoid the large vessels, and long enough to enable the operator to remove the entire wrist from the ends of the metacarpal bones to the heads of the radius and ulna. An effort was always made, however, to follow as nearly as possible any preëxisting sinuses or openings into the joint. The bones, being carefully dissected away from the soft parts, were sawn through with a short hand resection saw. A tourniquet and bandage were applied to prevent hæmorrhage during the operation. The operations were done antiseptically, drainage tubes inserted, the Lister dressings were afterwards applied, and the hand usually placed upon a Bond's splint.

CASE I. M. Q., aged thirty, entered the Massachusetts General Hospital July 18, 1877, with a puffiness about some of the tendons overlying the wrist-joint. The fingers were freely movable, but he had been obliged to give up work, as the hand was useless. An attempt was made to arrest the progress of the disease by pressure with sponges, and subsequently with plaster bandages. A seton was subsequently passed through an abscess and the joint for the purpose of drainage, but without improvement, and on March 8, 1878, he reëntered the hospital for excision, which was performed March 27th. On June 14th the patient was discharged with the wrist much improved in appearance and the wounds nearly healed. A year later the patient reappeared to show his hand; there was some motion at the wrist-joint, which had healed entirely, but there was considerable stiffness in all the finger-joints. The hand was forcibly flexed and bandaged in that position, but the patient, who was much addicted to liquor, could not be induced to make any voluntary or persistent efforts toward developing the use of the hand. The use of some of the finger-joints subsequently improved, and he could grasp a substance between the thumb and hand. The last record is July, 1881, a little over three years after the operation, when it is stated that the hand and wrist have become quite useful. There is good motion at the wrist-joint, but there is inability to flex the carpometacarpal articulations. The accompanying drawing is taken from a cast of the hand at about this period.



CASE II. C. E. B., aged twenty-nine, entered the Massachusetts General Hospital March 22, 1879, with a sinus opening into the wrist-joint and discharging offensive pus. His general condition was bad. Myrrh dressing, consisting of a weak solution of tincture of myrrh on charpie, was applied without benefit, and on May 16th he reëntered the hospital with the joint swollen and boggy. Excision was performed; the antiseptic dressing was continued until he left the hospital, a fortnight later. He returned in September in a feeble state of health, the arm and fingers much attenuated, and the wrist swollen and perforated with sinuses, the openings of which had a dull purple color, their walls being constituted of a soft gelatinous tissue. The whole aspect of the diseased part was not unlike that of a rotten apple. This tissue was easily broken down with the finger, and was thoroughly bored with a stick on the end of which was tied a small piece of sponge sprinkled with iodoform. Setons of oakum also sprinkled with iodoform were run through the various sinuses, and under this treatment the appearance of the joint greatly improved. Fourteen months later the record reads: There is no gelatinous tissue; the skin is natural in color; there is considerable use of the fingers; the thumb is adducted by a bandage which he is told to omit; joint loose; wrist-drop; health better. April, 1881. One small sinus still existing; can use the index and middle finger nearly as well as those of the left hand; wrist-drop has disappeared. July, 1881. Wound healed; wrist quite flexible; hand very useful; he is much pleased with the result, but there is inability to flex the carpo-metacarpal articulations. His general health is good.

---

[1] Read before the Boston Society for Medical Improvement.

CASE III. C. B., aged fifty-three, entered the hospital June 6, 1879. The disease had existed two years. There was enlargement of the joint, and the integuments were red and swollen. There was no control over the fingers; a stiff bandage failed to give relief; the joint suppurated, and was excised August 2d. The antiseptic dressing was continued for a month, when, as there was little improvement in the healing process, various other modes of dressing were substituted, as oakum setons soaked in balsam of Peru or powdered with iodoform. He was finally discharged in January, 1880, with several sinuses still open. In April, 1882, he called upon me, reporting that the hand had been amputated about a year before. The stump had healed, and his general health was excellent.

CASE IV. J. C., aged fifty-five, fisherman, entered the hospital August 27, 1879. His wrist had been lame for three years, but he continued his occupation until five days previous to entrance. The wrist was much inflamed and swollen; a large abscess containing dead bone had opened over the carpus. The abscess was freely opened, the bone removed, drainage tubes were inserted, and a poultice applied, but as the inflamed condition continued the wrist was excised September 27th. The Lister dressing was removed October 11th, and ten days later the drainage tubes were removed. He was discharged October 26th. On January 15, 1880, the wrist appeared to be in a tolerably healthy condition, although one or two small sinuses still remained open. He could move the fingers a little, but did not have much power over them. He was seen six months later, when the wrist was found improved in appearance, although the sinuses had not entirely closed, and he had not been able to use it to any extent.

CASE V. J. K., aged twenty-seven, shoemaker, entered August 29, 1879. The right hand had been lame for five months, but he had been able to work until six weeks previously. The joint was much swollen, and some wrist-drop existed. He was kept in the hospital until September 22d, and was then discharged wearing a stiff bandage. In July, 1881, he re-entered with the joint enlarged and painful and an open sinus discharging. Two days later the wrist was excised in the usual manner; there was much pulpy degeneration of the soft parts, and the caries of the bones was quite extensive. An iodoform dressing was applied on oakum, but as considerable inflammatory action was produced the oakum was changed and a phenyle dressing substituted. He was discharged on September 29th with wrist in good shape, and showing only two small granulating surfaces the size of a ten-cent piece. He returned to the hospital, by request, in the spring of the present year, when the wrist was found to be healed, but the wrist-drop continued, and the use of the hand was quite limited. There was a small abraded surface over the ends of the bones of the forearm, which involved only the upper layers of the skin. His general health was fair.

CASE VI. J. T., a teamster, twenty-one years of age, sustained a gunshot injury of the left wrist which blew a hole through the joint, carrying away the head of the radius. The joint was resected July 20, 1880. One or two of the carpal bones were left, however. A Lister dressing was applied, and on October 23d he was discharged with the wounds entirely healed. There was a deep indentation at the point previously occupied by the head of the radius. He was seen a year later when the hand was found slightly flexed towards the radial border of the wrist; the fingers were stiff at the metacarpal articulation, but were somewhat movable at the other joints. The wrist-joint could be moved freely. There seemed a fair prospect of his obtaining a useful hand.

CASE VII. B. L., aged forty-three, carpenter, was injured by a sliver of timber six weeks before entrance to hospital, April 1, 1882. The appearance of the hand was that seen in severe forms of palmar abscess. The whole hand was stiff and swollen and numerous sinuses discharged at various points; his condition was correspondingly bad. After several ineffectual attempts to overcome the burrowing of pus by free incisions the wrist-joint was laid open by an incision on the dorsal aspect of the hand following the line of the radio-carpal articulation, that is, by a curved incision with its convexity pointing upwards. The flap being dissected downwards the carpus was freely exposed and found to be the seat of a collection of pus at its centre. The parts having been well laid back below this point a transverse section was made through the carpal bones with a saw. The other bones being healthy a full resection of the wrist was not made. The ends of the radius and ulna were not removed. This mode of opening the joint was adopted to expose the diseased parts thoroughly, and then terminate the operation by an amputation, if necessary, which alternative the patient fully expected. The wound, however, was closed, but without any special effort to readjust the divided tendons. Drainage tubes were passed through the wound and a poultice applied that night. Steady improvement took place from this time both in the joint and in his general health, and he was discharged a month later with the hand in about the condition one would expect to find it when convalescent from one of the worst forms of palmar abscess. Passive motion was actively kept up in the finger joints. This case must be classified as a partial resection only of the joint, as must also, strictly speaking, Case VI.

It will be seen that in but one of these cases a resort to subsequent amputation became necessary, the patient being much more advanced in years than the rest. In only one case, however, has a thoroughly satisfactory result been ascertained to exist (Case II.), and yet this very case was at one time more unpromising than any of the others. Case V. does not give promise of a useful hand, but this is due to a paralysis of the extensor muscles which existed previous to operation. The patient has been a resident of a poor house since, and is therefore not so situated in the world as to give himself all the advantages which might be obtained from after treatment. Case I. would undoubtedly have yielded a perfectly satisfactory result had not the patient been a confirmed drunkard. The healing of the wound in all cases was very slow, although great care had been taken to remove all diseased bones, the point to which Lister attributes success in this operation. Although the results do not appear especially brilliant, the experience obtained by these cases would lead me to prefer resection to a more conservative operation which would not contemplate the removal of such portions of the joint as were not markedly the seat of disease, and would be confined chiefly to laying open sinuses and scraping the bone, or to more radical treatment by amputation.

◆

A CASE OF BRIGHT'S DISEASE TREATED BY PILOCARPINE.[1]

BY S. G. WEBBER, M. D.

JAMES O'N., aged thirty-five, entered the City Hospital January 4th. He had had varioloid, but no other fever. He had a fit two years ago when he was unconscious for two days, since which he was well till three weeks before entrance; then he retired Saturday night, and was not conscious again until the next Monday morning. His friends told him that he frothed at the mouth and kicked about. They were so assiduous in their care that they raised a large blister with mustard across the whole width of the back and about ten inches vertical length, and also by hot water or otherwise had produced a superficial ulceration about six by four inches on the right thigh, and a smaller one on the left ankle. He had no headache nor nausea. The face and legs were very œdematous, and a few days after admission he could scarcely see from swelling of the eyelids. There was a faint systolic murmur at the apex.

The urine was of high color, acid specific gravity 1013, contained about one fourth per cent. albumen; in the sediment were found hyaline casts, fine and coarse granular, epithelial and a few fatty casts, renal epithelium, some blood and pus, triple phosphates, and amorphous phosphates.

He received ten minims of digitalis, and the ulcers on the legs were dressed. He passed forty ounces or more urine daily. There was little or no change in his condition until January 10th, when he began to vomit, having considerable nausea and distress; and during the visit he had a convulsion, which was general, consisting in an exaggerated tremor rather than violent kicking. A third of a grain of nitrate of pilocarpine was given immediately, and soon after two drachms of brandy subcutaneously. He sweat freely, but the convulsions continued at intervals through the day, and he received a quarter of a grain of morphia once, and the pilocarpine was repeated at three and six P. M.

During the night he had several fits, but in the morning he said he felt comfortable, and the œdema was much diminished. On the 11th he received pilocarpine at ten A. M. and at noon. On the 12th he had it at two P. M. without much increase of sweat, but the urine increased in amount. On the 13th pilocarpine at noon, on the 14th at four P. M., on both occasions followed by free sweating, the amount of urine rising to seventy-six ounces. The last dose of pilocarpine was followed by slight vomiting.

On the 15th he had a convulsion at three P. M., which recurred at frequent intervals during the afternoon and night. Pilocarpine was given at 3.30 and at six P. M. The next day, 16th, at the visit the œdema was very much diminished, the man was insensible, bloody froth was running out of his mouth, which had to be swabbed out; he seemed to be moribund. The pilocarpine was given in the morning and at six P. M. He had only a few fits during the afternoon and none during the night.

There were no more convulsions. The pilocarpine was administered twice a day on the 17th, 18th, 19th, and 20th; he recovered a fair share of intelligence, slept well, took and retained about twenty ounces of milk; had eggs by enemata; the œdema almost entirely disappeared. He had one dose of pilocarpine on the 21st, two on the 22d, one on the 23d, 24th, and 25th. On the last date the power of expectoration was lost, and he died soon after receiving the pilocarpine. At times the skin became dry and harsh, and the sweating after the pilocarpine was diminished, but after rubbing with oil, the skin acted again freely.

Mr. Elliot, the house officer, examined the sweat and found it to contain a very large amount of urea.

The kidneys were found to have undergone amyloid degeneration. One weighed thirteen ounces.

This case is interesting as showing the efficacy of pilocarpine to produce its peculiar effect in exciting the sweat glands during many days of continuous use. Also its value in checking the convulsions, in preventing their return, and in prolonging the patient's life. A large amount of urea was excreted through the skin, and so much water escaped thus that the œdema disappeared. Another point of interest is that although the urine increased to seventy-six ounces the convulsions recurred just then.

◆

REPORT ON PROGRESS IN THERAPEUTICS.

BY FRANCIS H. WILLIAMS, M. D.

PILOCARPINE IN DIPHTHERIA.

SINCE the publication of an article by Dr. George Guttmann on the use of pilocarpine in diphtheria, which was referred to in volume c., page 317, of this JOURNAL, there have been many trials of the drug.

Dr. Paynardeau[1] thinks that under pilocarpine the false membranes are detached earlier than usual, that membranes in inaccessible places may be detached and expelled by the aid of pilocarpine, and its use would be indicated when the danger is from the false membrane rather than from the diphtheritic poison. On the other hand, pilocarpine sometimes causes violent and persistent vomiting, diarrhœa, and especially prostration and collapse, which are the more formidable, since in diphtheria there is a tendency to syncope and cardiac weakness.

In the same journal Dr. Tayac says that the action of pilocarpine in diphtheria is prompt and energetic, and its administration is almost always followed by the elimination of the diphtheritic deposit, and oftentimes a general improvement in the condition of the patient. If administered from the beginning it may hinder the development of the disease. He considers that further trials are necessary.

Dehio, of St. Petersburg, uses instead of Guttmann's prescription the following: —

Chlorhydrate pilocarpine . . .	(Merk's)	0.05
Water		50
Sherry wine		50 M.

S. Ten grammes every two hours.

---

[1] Read before the Boston Society for Medical Observation, February 6, 1882.

[1] Journal Thérapeutique, 1882. No. 7, p. 259.

Demme gives the drug subcutaneously. Lepidi-Chioti made some experiments on the best method of giving this remedy. According to him it is best administered by the rectum, three centigrammes in sixty grammes of fluid. When thus given it is less apt to cause vomiting than by the stomach, and in children they are not frightened by the prick of the syringe.

M. Archambault[1] reports twenty-one cases of diphtheria.[2] Twelve of the patients died and only nine recovered. The cases which ended in death were severe ones, the others were not so. The conclusions drawn were: —

"(1.) That no case was cured which seemed to show clearly any positive, and at the same time unusual, efficiency in the treatment.

"(2.) That in many cases the remedy acted unfavorably by causing great depression without any compensatory amelioration in other symptoms of the disease.

"(3.) That in the cases which ended in recovery the membrane did seem to be loosened and more readily removed than in cases in which salivation was not induced; but that this greater facility of removal by salivation did not seem sufficiently advantageous to outweigh the other depressing effects of the treatment.

"(4.) That in the severe cases a new membrane was deposited on the surfaces from which old patches had recently separated, in spite of the fact that salivation was being kept up by the use of pilocarpine; and therefore that the treatment did not prevent the continued formation of membrane."

In general, the author is inclined to infer from his observations that the treatment of diphtheria with pilocarpine is not followed by good effects, and that its advantages are outweighed by its disadvantages.

CHINOLINE AND ITS USE IN DIPHTHERIA.

It was hoped that in chinoline or rather chinoline tartrate would be found a substance which could be used as an efficient substitute for quinia. According to Dr. Danath[3] it is a very powerful antipyretic in enteric and intermittent fever and is an excellent local antiseptic. It may be taken easily and no unpleasant after effects are caused by it.

In the following number of the same journal Dr. Von Jäksch is quoted as objecting to the unpleasant taste and vomiting caused by another salt, the hydrochlorate of chinoline. In the May number of the *Practitioner*, Dr. De Vey recommends the borate of chinoline, three grammes of the salt being equal to two of the sulphate of quinia.

It would seem from this that there is a great difference in the amount of irritation caused by the various salts of chinoline, but that they all have antiseptic and antipyretic properties.

Drs. Biach and Loimann[4] have investigated the physiological action of chinolin.

Dr. Brieger has carried out experiments on chinoline in the clinic of Frerichs.[5] He has obtained no good results from the drug in typhus, pneumonia, rheumatism, and remittent fever; it being in some cases vomited, thereby probably reducing the temperature very slightly. Disturbances of digestion, vomiting, and nausea are caused by it so that it does not seem advisable to use it in its present form. Hiller has made similar observations, including also phthisis and enteric fever, with like results. It caused vomiting in three fourths of all the patients to whom it was given and he has abandoned it.

In an article on the treatment of diphtheria by chinolin[6] Dr. Otto Seifert speaks of using a five per cent. solution of tartrate of chinoline applied to the tonsils with a brush. The patients complained of an unpleasant taste and smell and a burning sensation, which was relieved by gargling with water. He found the tartrate so disagreeable to the patients and so insoluble in water that he used the pure chinoline instead.

He employed a mixture of equal parts of water and alcohol holding five parts of pure chinoline in solution. Local applications of this were made on a piece of cotton wool on a sound or by means of a brush; in the lighter cases applications were made morning and evening; in the more severe three or four times a day. Besides this treatment he used an ice-bag to the neck, broken ice, and in many cases a gargle of —

Chinolini pur.	1
Aq. distill.	500
Spir. vin, ...	50
Ol. minth pip. gtt.	ij. M.

Under this treatment he claims that the membrane is loosened in from twelve to twenty-four hours, the glandular swelling subsides more quickly than otherwise, and the temperature is reduced.

NITRO-GLYCERINE IN THE TREATMENT OF HEART DISEASE AND PUERPERAL CONVULSIONS.[7]

The physiological action of this drug was studied by Lauder Brunton, whose paper was contributed to the St. Bartholomew Hospital Report for 1876. It was introduced to the profession by Dr. Murrell. This drug is similar in its action to nitrite of amyl, but its effects come on more slowly, within three minutes, and continue from four to six hours, when it may be repeated. A solution is the form most used, one per cent. in spirits of wine. It is nearly tasteless. The usual dose is one minim, or less, taken in water or placed on the tongue. This should never be exceeded in the beginning, as even this small quantity has been known to cause serious symptoms, though never fatal results. It paralyzes the vaso-motor centres, and the peripheral arterioles are dilated.

Dr. Green has found that while it is useful in almost all cases of heart disease, its greatest benefit will be observed in angina pectoris, and in weak, dilated, and fatty heart. He has used the drug for more than two years, and is more and more pleased with its value. A number of cases in which the drug was used are cited. Sudden congestions of the lungs in cardiac disease are relieved by the flow of blood to the surface, which is brought about by this remedy. In another journal[8] the same writer gives an account of the successful use of this drug in puerperal convulsions. He believes that there are several causes of puerperal convulsions, but the largest number of cases are the result of a high tension of the arteries, caused by their containing blood which has been imperfectly depurated, probably owing to pressure upon the renal arteries by the gravid uterus. The next most frequent cause is sudden or exhaustive hæmorrhage. In both these cases the convulsion is probably the result of an anæmic condition of the brain, which may be relieved by this drug.

---

[1] Bull. et Mém. de la Soc. de Thérap., November 15, 1881.

[2] New York Medical Journal, March, 1882, page 324.

[3] Practitioner, January, 1882, page 45.

[4] Versuche über die physiologische Wirkung des Chinoline, Arch. f. path. Anat. u. Physiol. u. f. klin. Med., lxxxvi., 3. 1881.

[5] Deutsch. Med. Zeit., February 2, 1882. American Journal Medical Sciences, July, 1882.

[6] Berlin.klin. Wochenschr., No. 22, 1882.

[7] W. E. Green, M. R. C. S., Practitioner, February 1882, page 103.

[8] British Medical Journal, April 22, 1882.

TREATMENT OF ACUTE DYSENTERY BY ACONITE.

Dr. Owen[1] has tried ipecacuanha in dysentery, but objects to the vomiting which it causes, for this and other reasons he prefers aconite. He gives one minim of the tincture (British Pharmacopœia) every quarter of an hour for two hours, and one minim every hour afterwards; should the patient sleep he must make up the lost doses. The diet is as important as under any other treatment. His cases got only rice and milk, and a few had milk alone. The duration of the aconite treatment varied from seven hours to thirteen days, he average was four days. An experience with one hundred and fifty-one cases permits him to speak strongly in favor of this treatment.

TOPICAL APPLICATION OF IODOFORM.

Dr. Whitehead,[2] like many others, has found iodoform of great service in the treatment of soft sores, but he has found a way to completely hide its nearly irrepressible odor. Before making the application he first cleanses the sores by means of little pledgets of bibulous paper, and then applies freely, with a camel's-hair pencil, a solution of iodoform in ether, one part iodoform and two parts ether; the ether rapidly evaporates, and leaves a layer of fine powder. When perfectly dry each sore is given a coating of collodion, which is allowed to overlap about one quarter of an inch the area of each sore. Before the collodion has had time to dry a pinch of absorbent cotton-wool is placed on each patch as a protection against the rough contact of clothing. The dressing is renewed every day until the sores have quite healed. A further advantage gained is the protection afforded by the collodion against auto-inoculation.

As regards the poisonous effects of this drug, Dr. Henry E. Clark[3] finds that in all cases there is pyeraxi, the pulse is rapid and feeble, nausea, vomiting, and loss of appetite are invariable symptoms; there is always lassitude, headache, and often delirium; the symptoms sometimes resemble meningitis. Although iodoform is so freely used, it is curious that constitutional effects are seldom produced. He thinks there is less danger when the applications are made to a free surface than when the iodoform is applied in a sinus; some granulating surfaces absorb more readily than others, healing burns being especially adapted for absorption.

THE IDENTITY OF THE ACTION OF IODINE AND IODIDE OF POTASSIUM.[4]

It is presumed that iodine taken internally is transformed into an iodic albuminate, so circulates in the blood, and is then converted into an alkaline salt, and excreted from the system. Experimentally it has been proved that iodine can be liberated from the iodide of potassium when that compound is exposed in an aqueous solution to carbonic acid and protoplasm. The same conditions appear to exist in the tissues. Other theorists imagine that iodine and iodide of potassium have a totally different action, and that the efficacy of the salt depends in a measure, if not entirely, on alliance with the alkaline base.

He reports a case which bears pertinently on the point at issue, namely, can the phenomena of iodism be observed in the same individual by the administration of both substances? A woman, aged thirty-five, was admitted to the infirmary suffering from chronic rheumatism. She was ordered ten grains of iodide of potassium in four drachms of infusion of quassia three times a day. Half an hour after taking the first dose she complained of slight itching of the nose and tenderness of the nasal and conjunctival mucous membrane. This was increased by the second dose, and in an hour after taking the third she stated she had small, shot-like elevations, appearing first on the inside of the knees, then spreading over the body. The eruption was most marked on the legs and elbows. She also observed that the feeling was as if she had had "the skin laid bare, and that she was bathed in salt and water." The soreness was more marked than the itchiness. On stopping the medicine it was found that they disappeared in twelve to twenty-four hours. She stated that on a previous occasion when in the hospital the same phenomena were observed; examination of the ward journal showed that she had then had iodide of potassium.

In order to see if similar results would be produced by the internal use of iodine she was given five drops of the tincture thrice daily. The following morning, no effect being manifest, the dose was increased to ten minims, and subsequently to fifteen minims, but without any result such as had been anticipated. After an interval of two days twenty drops of tincture of iodine were ordered at one dose, to be repeated thrice daily. After the third dose symptoms of iodism were manifested. The nose became itchy, the eyes swollen, and she experienced again the same peculiar "salted sensation;" the small papules were also seen, but were not quite so numerous as with the iodide.

Reports of Societies.

THE NEW YORK LARYNGOLOGICAL SOCIETY.

TUBERCLE OF THE LARYNX. — EXCISION OF THE TONSILS. — ADENOMA OF THE PHARYNX. — RECEPTION TO DR. MORELL MACKENZIE, OF LONDON.

The New York Laryngological Society met on the evening of October 13th at the house of Dr. R. P. Lincoln, who availed himself of the occasion to offer a very handsome reception to Dr. Morell MacKenzie, of London, now on a visit to New York. This was attended by a large number of prominent New York physicians and surgeons, and among the guests present were several representatives from Philadelphia, Baltimore, and New Haven of those specially interested in the subject of laryngology. The first paper of the evening was by Dr. J. Solis Cohen, of Philadelphia, an honorary member of the Society, on Tubercle of the Larynx. It was profusely illustrated by drawings from the camera lucida and by large colored pictures, as well as by sections under the microscope, and among the principal points brought out were the following: Tubercle of the larynx was now fully established as a pathological entity, but there was no positive proof that it ever occurred as a primary affection. All the evidence that had been advanced in favor of the latter proposition was simply clinical and presumptive, and he was at present entirely unwilling to acknowledge its validity. In all his practice there had been but three cases of this presumptive primary tubercle, and Dr. Solis Cohen gave a brief outline of the history of each. All the cases of laryngeal tubercle could be divided into two great classes, the acute and chronic; and preceding the deposition of tubercle (a phrase which he said he used merely because it was recognized as the current mode of expression, and not as giving his assent to any pathological process implied in it) there was always a merely inflammatory stage, which was characterized by the well-known pyriform swelling of the arytenoid cartilages. Another point that he believed to be now satisfactorily demonstrated was the infiltration of the glands in this affection.

---

[1] Indian Medical Gazette, April, 1882. Practitioner, July, 1882, page 57.

[2] British Medical Journal, March 11, 1882.

[3] Medical News, August 26, 1882.

[4] M. Charteris, M. D., Professor of Therapeutics in Glasgow University, Lancet, May 6, 1882.

The paper was discussed by DR. MACKENZIE, who said he considered it a most valuable contribution to our scientific knowledge of this important subject, and by DRS. KARL SEILER, of Philadelphia, CHARLES HEITZMANN, and F. H. BOSWORTH. The latter remarked that he was particularly pleased to hear Dr. Solis Cohen state so positively that the first stage of laryngeal phthisis was an inflammatory one, as the opinion coincided entirely with his own views, and sanctioned the idea that the disease in this stage was curable, in confirmation of which point a very considerable amount of clinical proof had now been accumulated.

The next order of the evening was some remarks on Excision of the Tonsils, by DR. MACKENZIE, who was received with much enthusiasm. He said he had selected this subject for the reason that he thought from what he had read and heard that the dangers of this operation were very greatly exaggerated in America, and particularly was this the case in a paper read by Dr. George Lefferts at the meeting of the American Laryngological Association next before the last, which was so excellent in all other respects that it would be apt on that very account to carry all the more weight with it. He first alluded to the points made by Dr. Lefferts, and then went on to say that if the operation was performed in a proper manner, and if sufficient attention was paid to the subsequent prevention of hæmorrhage, there was no danger whatever connected with it. He had long since discarded all other methods of removing or diminishing the size of the tonsils, such as the use of caustics, tincture of iodine, etc. Iodine, in fact, he believed, had the effect of even increasing the size of the organs when it was kept up for some time, and the same was probably true of solution of nitrate of silver. The tonsillotome was, in his opinion, much preferable to the bistoury, although the latter was still preferred by Dr. Ellsberg, the president of the Society, and other good laryngological surgeons. By means of this instrument the operation could be performed more quickly, with less pain to the patient, and with less hæmorrhage than with the knife. He had seen so world-renowned a surgeon as Sir William Ferguson take fully two minutes to remove two tonsils with the bistoury, and this with a vast amount of pain and distress on the part of the patient, while he himself, with infinitely less operative skill, could have done the same thing equally well in five seconds with the tonsillotome. Some of the tonsillotomes in use were provided with prongs, by means of which it was supposed that the amount of the organ to be removed could be regulated, but this was a complete fallacy, and he considered such an addition to the instrument a very great disadvantage. The one that he preferred, and was constantly in the habit of using, was that invented by Dr. Physick, of Philadelphia, with one or two slight modifications suggested by himself, and he had found it entirely satisfactory in every way. As to the size of the portion to be removed, or whether it would be advisable to remove any of the tonsil at all in any given case, that must depend on the relative size of the pharynx of the patient. It was never, under any circumstances, necessary to excise the whole organ, and, indeed, with the tonsillotome this was quite impossible. It was a good plan to press inward the tonsil to be cut by means of the thumb on the outside of the throat, and in this way one could easily regulate the amount of tissue to remove. It was always advisable to reduce the tonsil at once to the size desired, as he had never noticed any perceptible shrinking of the remaining portion after the operation. As a rule the specialist in diseases of the throat could perform the operation with greater facility than the general surgeon, not only on account of his more extended experience with it, but also because he always had the best sort of light immediately at hand, and this he believed to be a very great advantage. In conclusion Dr Mackenzie laid great stress upon his method of preventing hæmorrhage after the operation, which was exceedingly simple, and yet which always proved perfectly effective. This consisted of the use of the following mixture: three hundred and sixty grains of tannic acid and one hundred and twenty grains of gallic acid to the ounce of water. It had been found that tannic acid would not become dissolved in the presence of gallic acid, and hence the great advantage of this preparation, which was to be swallowed, and not employed as a gargle. It was necessary to use this only in very small quantities (a quarter of a teaspoonful often being quite sufficient), and, indeed, it was so very disagreeable to the taste, that it was difficult to get patients to take very much of it. Many surgeons were in the habit of ordering their patients to gargle after the operation, but he considered this wrong, as it tended directly to bring on hæmorrhage, and in no way could an astringent be so effectively applied to the bleeding surfaces as in the act of deglutition.

DR. LEFFERTS made some remarks in reply to Dr. Mackenzie, in the course of which he reiterated the opinions expressed in the paper referred to, which was based, he said, on five hundred cases of excision of the tonsils. Out of the five hundred there were two in which the hæmorrhage following the operation nearly proved fatal; but in both of these the cutting was done with a bistoury. One quite frequent source of hæmorrhage in the operation he thought was the fact that the anterior fold of the soft palate was to some extent spread over and adherent to the tonsil, and it was liable to bleed quite freely when cut.

DR. ANDREW H. SMITH and DR. DELAVAN had each met with one case in which there was dangerous hæmorrhage. In the former's case there did not seem to be any special reason why the unusual loss of blood should have occurred; but in Dr. Delavan's the child operated upon proved to be of a markedly hæmorrhagic diathesis.

Dr. Jacobi remarked that he recognized the source of hæmorrhage of which Dr. Lefferts had spoken as one liable to be met with, and that when he found the condition referred to present he was in the habit of separating the adhesions between the tonsil and the anterior fold of the palate by means of a probe, before he proceeded with the operation, and was thus able to avoid any bad result from it.

Remarks were also made by Drs. Bosworth and Solis Cohen, and by one or two other gentlemen, after which the discussion was brought to a close by Dr. Mackenzie, who said he was very glad to hear Dr. Lefferts acknowledge that in the only two cases out of his five hundred in which he had met with dangerous hæmorrhage he had operated with the bistoury, and not with the tonsillotome.

The last paper was by Dr. F. H. Bosworth, of New York, on the subject of Adenoma of the Pharynx; but, in consequence of the lateness of the hour, he merely gave a synopsis of it. This affection, he believed, was much more common than was generally supposed. It was entirely benign in character, as was shown by the fact that it did not return after removal; and it consisted merely in a hypertrophy of the normal tissue of the part where it was situated. An elaborate description of the microscopic appearances presented by it, prepared by Dr. Heitzmann, was then read. The method of removing the growth which Dr. Bosworth now preferred to all others was by means of Jarvis's steel wire snare, which he exhibited to the gentlemen present.

In the afternoon Dr. Mackenzie lectured before the students of Bellevue Hospital Medical College.

◆

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY MAURICE H. RICHARDSON, M. D., SECRETARY.

VACCINATION AFTER VARIOLA. EFFECTS OF VACCINATION AND REVACCINATION.

February 6, 1882. — Dr. Wells related an instance coming under his observation when health officer in a Western city during an epidemic of small-pox, where the disease being introduced into a family by the advent of a relative from the country, all the members were vaccinated except one who had previously had the disease, bearing the marks of it in thorough pitting. None of the family were infected except the last named, who suffered from a well-marked second attack. Dr. Wells had met with several persons who had had small-pox twice; and in view of these facts he thought it the duty of physicians to advise frequent revaccination, even in those who had had variola.

Dr. Reynolds questioned the advisability of such advice in all cases. There is an undoubted possibility of the recurrence of variola. This fact we should undoubtedly state to the patient, and allow him to take his choice between the two evils; for, in certain cases, even revaccination is an evil. It is a slight matter, it is true, but in weak and elderly persons the constitutional symptoms are often severe, and may enfeeble an already feeble person. Dr. Reynolds often hesitated as to the propriety of advising revaccination in such case. He also spoke of a case of primary vaccination seen by him of late where there was severe constitutional disturbance, and an eruption having much the appearance of that in confluent small-pox.

Dr. Webber stated that he had rarely seen this winter a distinct vesicle in secondary vaccination. There was usually a red papule, growing larger, surrounded by an areola, and covered with a scab. He asked whether the members considered this a protective vaccination.

Dr. Reynolds replied in the affirmative. He thought this condition bore the same relation to that of a typical primary vaccination, as did the half-ripe to the mature fruit. It evidenced the action of the vaccine matter, modified by the primary vaccine disease.

Dr. Ingalls stated that his experience agreed with that of the previous speakers. He had seen a typical vesicle but once this winter in a secondary vaccination, and observed that the manifestation developed later than in his former experience. Often as late as the seventh day nothing could be seen but a slightly elevated red spot, gradually enlarging, but with no vesicular formation, a brownish or black crust appearing towards the second week. In spite of great care in the operation, he had met with this result constantly.

Dr. J. B. Ayer's experience was that in primary vaccination about ten per cent. showed a typical vesicle; ten per cent. more a vesicle of irregular shape; twenty per cent. showed an apparent attempt at vesicular formation. In the remaining sixty per cent. little or no vesicular formation. In reply to a question by Dr. Reynolds, Dr. Ayer stated that he vaccinated in the usual manner, scarifying a small surface thoroughly, and rubbing in the virus for a considerable time.

Dr. Reynolds thought it was the common experience of late that in secondary revaccination with bovine virus the appearances developed much more slowly than formerly.

Dr. Dunn mentioned a case of primary vaccination, followed in ten days by a general papular and pustular eruption, with constitutional symptoms, and also mentioned five cases of eczema, developing soon after vaccination and apparently caused by it. One of these was very obstinate, resisting the treatment of skilled specialists.

Dr. Reynolds spoke of a case of erythema of the palms of the hands and soles of the feet, coming on soon after vaccination.

Dr. Ayer mentioned his custom of determining the efficacy of certain virus by inoculating a child primarily. If there were evidence of vesicular formation in four or five days, he felt safe in using the same virus for secondary vaccination.

Dr. Greene asked if any one could explain the strawberry appearance occasionally seen in secondary vaccination. He had met with it several times of late, as had Dr. Reynolds.

Dr. Ingalls had seen it in primary vaccination. No explanation was offered.

Dr. Wells said that, judging from his experience in vaccinating through two severe epidemics, he should not expect any result from bovine virus until the seventh to the tenth day. Speaking of the infection, he recalled the custom in Oppolzer's wards in Vienna, where small-pox patients were placed in the same room with those ill with other disease; yet the disease did not seem to spread, and during an epidemic, where he had been thrown among those ill with small-pox, he had been astonished to note the comparatively few of the exposed, even of the unvaccinated, who contracted the disease.

DR. J. B. AYER'S experience differed somewhat in regard to the length of time elapsing in secondary vaccination before results were visible. In one hundred cases of secondary vaccination, where the patients were under close observation by a nurse in an institution, the question was asked if, in any case, where there was *no* evidence of successful vaccination by the fifth day, it ever had developed later. The answer was No. Dr. Ayer cited the case of a child of six years, primary vaccination; good result on the nineteenth day; after two days of fever an eruption of papules, each about the size of a split pea, appeared, abundant on the body, scanty on the face; temperature 103° F. at this time. There was a perfect pock on the arm, with considerable redness around it. The next morning the eruption had disappeared, and the temperature was normal. Dr. Ayer thought it unusual for an eruption of this character to appear later than the tenth day of the vaccine disease.

DR. T. M. ROTCH reported a case of

THROMBOSIS OF THE POSTERIOR CEREBRAL SINUS.

in an infant and exhibited the specimen.

DR. HAVEN said the case was peculiarly interesting not only pathologically but as regards prognosis. This child was apparently perfectly well when admitted; and, as far as external appearances were concerned, and the performance of its vital functions, remained so for the first ten days. It ate well, slept well, and its movements were well digested and normal in amount and frequency. The child's friends could see nothing abnormal in its condition. At the end of the first week, however, a grave prognosis was made from nothing but the loss of weight, — a prognosis which the friends could not be brought to accept, but which the result proved correct.

Although the autopsy gives us no clew to the connection between the rapid loss of weight and the pathological condition found after death, except that of cause and effect, Dr. Haven felt certain there must have existed some ulterior cause producing both. That it was internal, and not due to any fault of the nourishment or hygiene of the nursery, he felt sure; for, in the period between this child's entrance and death, of seven other babies in the house, all under four months, and two younger even than this child, and none apparently in as normal a condition on entrance, one only, and he a seven months' child, and in a very debilitated condition on entrance, lost weight, and the loss for the same period then only amounted to ninety grammes. This loss has since been regained. These children were all under the same hygienic condition, and receiving the same food, so that it seemed to him the cause must have been due to some unknown condition in the child itself.

VAGINAL OVARIOTOMY.

DR. W. H. BAKER presented the regular paper of the evening, entitled Vaginal Ovariotomy.

Patient aged twenty-five; six years married; no children; complains of great pain in back and right groin increased on any exertion. A tumor of the size of a fist was found behind the uterus, freely movable, which was diagnosticated as a cyst of left ovary or broad ligament. Having increased one third in two months, it was aspirated *per vaginam*, and six ounces of sebaceous matter removed. Sixteen days after, there were symptoms that the cyst was suppurating, and after two days' delay operation was consented to. Patient was in Sims' position, and the posterior cul-de-sac was opened, the peritoneal incision being one and one half inches in median line. The cyst was drawn down to the vaginal incision and opened. The contents (which showed the cyst to be dermoid) had become somewhat offensive, and some of the purulent matter escaped into the peritoneal cavity. The patient died on the sixth day with evidence of septic peritonitis, which was attributed by the writer to the escape of the matter (made septic by former aspiration) into the peritoneal cavity, and the impossibility of washing it all out.

The writer's conclusions were that abdominal ovariotomy was always to be preferred to vaginal, except in the few cases, (1) where the cyst is small and the contents bland, so that there will be little danger of any, and especially of septic, matter escaping into the peritonæum; (2) of dermoid cysts small enough to be removed by the vaginal incision without evacuation.

DR. BEACH asked what provision had been made against septic infection by the air passing through drainage-tube.

DR. BAKER replied that, inasmuch as the contents of the cyst had escaped into the peritoneal cavity during the operation, he had thought it impossible to render the wound aseptic, and therefore endeavored to insure free drainage. Moreover, the end of the tube lay within the vulva, so that the air would not gain access to it, unless the labia were separated. Dr. Baker spoke of his endeavors to carrry out antiseptic precautions in operations for lacerated perinæum, but he had been obliged to relinquish them on account of the mechanical difficulties in arranging the dressings so as to allow vent to the urine and fæces. He had endeavored to accomplish this by putting in a self-retaining catheter and a rectal tube, but found it impossible.

Dr. Baker mentioned another case where he had removed a small, simple ovarian cyst through an abdominal incision, hoping to remove the cyst entire. The walls of the cyst were so thin that rupture occurred, and an unfavorable termination followed.

PILOCARPINE IN BRIGHT'S DISEASE.

DR. WEBBER reported a case of Bright's disease, showing the good effects following the use of pilocarpine.[1]

DR. DUNN spoke of several cases where he had thought this drug was indicated, but the salivation was so excessive that he had been obliged to relinquish its use.

DR. WELLS asked if any effect on the color of the hair had been noted, and cited several cases lately reported in a Philadelphia journal, where a decolorization of the hair had followed the use of pilocarpine.

DR. WEBBER had not noticed any such effect.

In reply to a question by Dr. Tarbell as to whether any permanent benefit was to be expected from the use of this drug, Dr. Webber replied that although in this case the disease was too far advanced to allow of any such hope, in other instances he believed permanent good had accrued, that is, the amount of urine was increased, œdema had disappeared, and the patient had been able to return to work. Dr. Webber never gave it, where the heart seemed weak, and always used stimulants in connection.

---

[1] Vide page 390 of this number of the JOURNAL.

Dr. Reynolds reported a case where he had administered pilocarpine to an infant, born prematurely, — seven months, — but having arrived at the age of six weeks; the child was well nourished, and the evening before the attack to be described apparently in good condition; nursed well, and went to sleep. Dr. R. was summoned at two o'clock in the night. The child had hiccough, and was apparently dying, being deeply cyanized. A satisfactory examination was impossible, but it was surmised that there was diphtheria. The battery was used, hot baths given, and one sixtieth of a grain of pilocarpine given hypodermically, every two hours, with brandy. There was occasional regurgitation of frothy liquid through nose, although fluids could be swallowed. Death ensued at eleven A. M. The next day on autopsy extensive capillary bronchitis was found, but no trouble in the throat or upper air passages. The pilocarpine was given on the strength of a conjectural diagnosis, and would not have been administered had the true state been known. Its action was very marked, the skin being bathed in sweat. One sixtieth of a grain was given six times in all. The diagnosis of diphtheria seemed more probable at the time from the fact that the preceding child, also born prematurely, had died with diphtheria.

ABDOMINAL ABSCESS.

February 20, 1882. The regular paper of the evening was read by Dr. J. H. Nichols on a case of abdominal abscess.[1]

Dr. Baker asked how quiet the patient kept herself during the early part of the disease. There is often a tendency to move about, though it causes pain at that time, the patient thinking a change of position is going to give her relief.

Dr. Nichols replied that she kept absolutely quiet. The slightest attempts at motion were attended by great pain. In the early part of the disease the constitutional symptoms of septicæmia were more marked than when the signs of localization appeared. Opium, quinine, and stimulants were given.

Dr. A. T. Cabot asked whether any discolorization of the urine followed the collapse after injections of carbolic acid.

Dr. Nichols said there was none. The solution used was very weak — two drachms to a pint of water.

Dr. Cabot remarked that the use of weak solutions for injecting abscesses or large cavities is more likely to give rise to poisoning than strong ones, because the former are absorbed while the latter spends itself in coagulating albumen.

Dr. Whitney asked whether the opening probably went into the abdominal cavity.

Dr. Nichols thought it to be a local peritonitis limited by adhesions. It did not seem to him to be, as Dr. Whitney suggested, an abscess of the abdominal wall where the peritonæum was not involved at all. At the time of opening the abscess there were no intestines visible.

Dr. Whitney said that he was reminded by this case of one which occurred at the Massachusetts General Hospital some years ago of a boy with empyema. This was doing well, when it was noticed that the abdomen was hard, tense, etc., and fluctuating. An opening was made near the umbilicus, pus evacuated, and a drainage tube inserted. The cavity closed up well. It was thought in this case that there was a diffuse inflammation or cellulitis which did not involve the peritonæum proper. Dr Whitney, therefore, thought that in this case there might have been a similar condition of things — a diffuse cellulitis rather than a peritonitis.

THE NEW YORK ACADEMY OF MEDICINE.

THE ORIGIN AND NATURAL HISTORY OF TUBERCULOSIS.

Dr. T. E. Satterthwaite read a paper on the above subject before the Academy at the meeting of October 19th. He alluded to the profound interest which the study of tubercle had always excited among practitioners of medicine, and to the fact that the present century had done much more for the elucidation of the subject than all the preceding ones; and then went on to speak of the labors of the great investigators of the early part of the modern era, Bayle, Bailey, Laennec, Louis, and Rokitansky. Their researches were based entirely on morbid anatomy, while those of the later observers had the advantage of being derived from experimental pathology as well as morbid anatomy, and some modern pathologists now asserted that any tissue or organ of the body might be the seat of tubercle. Many points in regard to tubercle were still far from being settled; there were, at all events, a vast mass of accumulated facts at our disposal. The special points which he wished to discuss on this occasion were, *first*, in regard to the histology of tubercle; *second*, its unitarian or dual character; *third*, its infectious or non-infectious quality; *fourth*, the mode in which it originates; and, *fifth*, the intimate nature of the infecting agent.

The tubercle discussed was here defined to be the true miliary tubercle, semi-transparent and granular, first described by Bayle. A *résumé* was then given of the tenets of Laennec, Louis, Reinhardt, and Virchow, and the later researches of Niemeyer, who endeavored to connect tubercle with pneumonia, but whose views were successfully combated by Bühl, of Munich.

Villemin was the first to claim that tuberculosis was a specific disease and communicable by inoculation. The results of his experiments were not favorably received, however, either in France or in England, where his views were notably opposed by Sanderson, Wilson Fox, and Andrew Clark. The experimental disease which Villemin and his school succeeded in setting up was justly named artificial tuberculosis. It was not easy, however, Dr. Satterthwaite continued, to point out the strict characteristics of miliary tubercle, and it was no wonder, then, that observers confused the characters of the real and the artificial disease. But, fortunately, the gross appearances of miliary tubercle, the bright and translucent body, and, later, the central caseation, could not readily be mistaken. It was a fact that tuberculosis could be set up in dogs by forcing them to breathe an atmosphere charged with various irritating substances, but in a considerable number of instances such experiments failed; while it was found to be *invariably* the case that if a dog were subjected to an atmosphere loaded with the sputa of tuberculous patients he became tuberculous. The latest experiments seemed, then, to substantiate the specific nature of the affection; tuberculous matter, whether inhaled or injected, appearing always to give rise to tuberculosis. Other substances did not act uniformly, and often failed in causing tuberculosis. As militating against the specific nature of tubercle, however, the case reported by Dr. Wolf was related, in which a blow upon the eye seemed to result in tubercle in a child previously free from any such trouble. But the probable explanation of the case was, that the traumatism was merely the exciting cause of tuberculosis in an individual previously disposed to it. The scientific mind was divided as to the specific character of tubercle, and clinical facts did not throw much light on the subject; although the results noticed in consumptive hospitals seemed to weigh against its contagious nature. The truth was that no *decisive* facts had been substantiated up to the present time, and it was, therefore, still difficult to believe that tuberculosis was an infectious disease with a contagious virus.

---

[1] See page 386 of this number of the Journal.

Dr. Satterthwaite then went into the subject of tuberculosis in horned cattle, and quoted Professor Law as stating that there was no satisfactory evidence that tubercle had ever been communicated by means of bovine lymph. The so-called bovine tuberculosis was entirely different in its morphological character from that of tuberculosis as we knew it in the human subject. In man the tubercles became cheesy, while in cattle they became cretaceous instead. In man ulcers and cavities were common in the advanced stages of the disease, while in cattle these rarely or never occurred, hard tumors being formed instead from deposits of the salts of lime. The glands also became enormously enlarged, and as hard as stone from the same cause. Dr. Crichton, of Cambridge, England, however, believed that a form of tuberculosis sometimes occurred in man which was identical with that met with in horned cattle, and claimed that he had seen twelve cases, but some objections had been urged against the correctness of his observations.

For many years different observers had associated bacteria with tuberculosis, and claimed that the latter had a pathognomonic kind of bacteria. As a rule but little attention was paid to such claims, but of late the researches of Koch, now of Berlin, had attracted more than ordinary notice. His claim was that there was a specific parasite, a peculiar microphite, which existed in every case of tuberculosis. Many investigators, including himself (Dr. Satterthwaite), had failed to detect the parasite in experiments made after Koch's methods; but in phthisical sputa he had succeeded in finding bacteria which corresponded to a great extent (although not perfectly) with those described by Koch. The matter, it must be granted, was still *sub judice*, but if Koch's views were correct their substantiation would forever set at rest the question of the unitarianism or duality of tubercle. At present there was a strong opinion in favor of unitarianism, founded not so much on minute microscopical details as upon the gross appearances of tubercle, and especially its characteristic central caseation. He then went on to speak of the different appearances met with in phthisis, and in treating of fibrous phthisis stated that it was that form of the disease in which nature was effecting a cure.

He next took up the subject of heredity. The hereditary nature of tuberculosis, he said, was abundantly proved by statistics. This fact, so strongly opposed to their views, the contagionists had to explain, and they were at least forced to admit that there must always be a predisposition to the affection. It was thus admitted by Koch, and the most violent of the contagionists, that there must be, *first*, a predisposition to the disease, and, *second*, an infecting agent. The treatment, therefore, should be directed primarily against the predisposition.

Finally, Dr. Satterthwaite gave a summary of his conclusions: Tuberculosis was a disease which deserved the name of hereditary. It was most apt to attack those members of a family predisposed to it who from any cause were least robust. The most characteristic pathological feature of the affection was a collection of minute, bright, glistening bodies, which had been called granules and miliary tubercle. This was of an inflammatory nature, because it was capable of being produced by various irritating substances. The lungs and serous membranes were most frequently attacked. As the disease advanced the tubercles gradually underwent caseation at the centre. In occasional instances, however, they became organized, and a cure was effected. Tubercles might be confined to a single lobe of the lung or other small portion of tissue, or they might be widely diffused, the latter being much the most dangerous form. Tubercle was capable of being inoculated, producing its kind if it produced anything, but other substances sometimes produced the same lesion. There was some good evidence in support of the contagiousness of the disease from close association. The best evidence of this character was from the study of the disease among the lower animals, especially horned cattle. There was no proof whatever that the meat or milk of phthisical cattle had ever produced tuberculosis in the human subject, yet the sale of such meat and milk should be prevented on the ground that they were less nutritious than those derived from healthy animals. So vaccine virus should always be taken from animals entirely free from tubercular taint. In the prophylaxis of the disease the chief attention should be directed to the vicious constitution of the patient rather than to the contagious qualities of the disease, which played an inferior and subordinate *rôle* if any at all.

Recent Literature.

Scrofula and its Gland Diseases. An Introduction to the General Pathology of Scrofula, with an account of the Histology, Diagnosis, and Treatment of its Glandular Affections. By FREDERICK TREVES, F. R. C. S., Eng., Assistant Surgeon to, and Demonstrator of Anatomy at, the London Hospital. Late Wilson Professor of Pathology at the Royal College of Surgeons. London: Smith, Elder & Co. 1882.

Mr. Treves explains in his preface that the absence of any special work on the subject of the general pathology of scrofula in the English language since the publication of the works of Phillips and Glover in 1846, or on the subject of scrofulous gland disease, since the appearance of Dr. Price's monograph in 1861, together with the importance of the manifestations comprised under the term scrofula, were the motives which prompted him to the preparation of the present octavo volume of two hundred pages.

Mr. Treves was, at one time, resident assistant at the National Hospital for Scrofula at Margate, and, though recognizing the fact that the subject of scrofulosis has received more manifest attention for some years back upon the Continent than in England, whereby its pathology has been reconstructed, its clinical outline more accurately defined, and a more distinct individuality imparted to it — of all which advantage has been taken — he is still able to assert that the greater part of the material of the present volume is the result of his own investigations into this disease. The clinical facts detailed are drawn, he states, from a careful examination of a very large number of scrofulous persons; the opinions expressed as to the pathological bases of struma, and the account given of the minute changes in the glandular affections, as well as the remarks on treatment, are all founded upon a careful personal observation of a rich material.

A perusal of the book confirms the statement that it is not a mere compilation or reproduction of others' investigations. It is divided into two parts, the first of which treats of the general pathology of scrofula, and the second of scrofulous affections of the external lymphatic glands; to these are appended five plates reproducing microscopical sections of different portions of scrofulous glands. These plates are borrowed from the article on scrofula, by the same author, written for a new English edition of Holmes' System of Surgery.

The author defines scrofula "as a tendency in the individual to inflammations of a peculiar type, the distinctive features of such inflammations being as follows: they are usually chronic, apt to be induced by very slight irritation, and to persist after the irritation that induced them has disappeared. The exudations in these processes are remarkable for their cellular character, and for the large size of some of those elements. Such exudations also show a remarkable tendency to resist absorption and to linger in the tissues, the affected area becoming rapidly non-vascular. Among the common products of these exudations are giant cells, and, if a certain stage of the process be reached, tubercles. The tendency of the process is to degenerate, not to organize, and the degeneration usually takes the form of caseation. At the same time these inflammations have a tendency to extend locally and infect adjacent parts, and their products present certain peculiar properties when inoculated upon animals. Lastly, a great feature of all these processes is this: they tend to commence in and to most persistently involve lymphatic tissue, an implication of this tissue being a conspicuous feature in every case of scrofulous disease. The tendency to this peculiar form of inflammation may be called, if so wished, a diathesis, or, more definitely, the scrofulous diathesis."

Much of part first is taken up with the individual and relative characteristics of scrofula and tubercle. Mr. Treves' position in regard to this part of his subject appears in the following paragraph: —

"Although one recognizes the fact that tubercle appears in scrofula, yet one is positively loth to term scrofula a tuberculous disease, and I would almost go so far as to say that it would be well *not* to call it a tuberculous disease until the bias associated with the latter term has been removed, until that term is accepted in a more generous and rational sense, and until it ceases to attempt to force an alliance between an anatomical appearance and a clinical state."

The following conclusions sum up the chapter on scrofula and tubercle: "(1.) The manifestations of scrofula are commonly associated with the appearance of tubercle; or, if no fully formed tubercle be met with, a condition of tissue obtains that is recognized as being preliminary to tubercle. *Anatomically*, therefore, scrofula may be regarded as a tuberculous or tubercle-forming process. (2.) The form of tubercle met with in scrofulous diseases is usually of an elementary and often of an immature character, whereas in diseases called tuberculous in a strict clinical sense, a more perfect form of tubercle is met with in the form of the gray granulation or adult tubercle (Grancher). (3.) Scrofula, therefore, indicates a milder form or stage of tuberculosis, and the two processes are simply separated from one another by degree."

The book is certainly a valuable contribution to the subject treated, and worth an index, which it is without; it also merits more careful proof reading on the part of the publishers, as errors of carelessness on pages 14 and 102, if not on others, testify.

Transactions of the Brighton Health Congress, 1881. *With Authentic Portraits, Maps, and Illustrative Diagrams.* Issued on behalf of the Building Fund of the Brighton School of Science and Art. London: E. Marlborough & Co.

The Brighton Health Congress was convened at Brighton at the time of the Domestic and Scientific Exhibition in December, 1881, under the presidency and largely at the instigation of Dr. B. W. Richardson.

Some account both of the Congress and of the exhibition was given the readers of the JOURNAL last winter in an interesting letter from its special correspondent.

This volume contains the papers read at the Congress, together with various maps and diagrams and photographic portraits of the president, Dr. Richardson, and of the veteran sanitarian, Mr. Edwin Chadwick, who presided over Section A, and delivered an address on The Prevention of Epidemics.

The papers, many of which are of much interest and value, are by well recognized authorities on the different questions which were discussed.

Essentials of Vaccination; a Compilation of Facts relating to Vaccine Inoculation, and its Influence in the Prevention of Small-Pox. By W. A. HARDAWAY, M. D., Chicago: Jansen, McClurg & Co. 1882.

Without pretending to be a comprehensive treatise on vaccination, this professes to be a careful compilation of the more essential facts relating to the subject. No claim is made to original investigation, previous writers upon the subject in Europe and America being freely drawn upon, and some account given of the practical administration of vaccination in this country. Animal vaccination is more especially considered.

How to Make the Best of Life. By J. MORTIMER GRANVILLE, M. D. Boston: S. E. Casino. 1882.

A small book of the primer order — one of a series — with good advice of a general character.

— The rate of vibration of the rattlesnake's tail has been determined by Dr. Ott as sixty per second. The method of experiment was by attaching to the tail a pen which wrote its record on a revolving drum.

Medical and Surgical Journal.

THURSDAY, OCTOBER 26, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

IMMIGRANT INSPECTION SERVICE.

The supervising inspector of the western district of the Immigrant Inspection Service, Dr. Rauch, in his report for the month of September, says: —

"Concerning the character of the protective work done by steamship surgeons, there is still the same disparity noted as has been commented upon before. Passengers arriving by vessels of the same line present the most marked contrasts. On one, the surgeon will have made a careful inspection and have vaccinated or revaccinated all unprotected or doubtful cases; on the very next arrival by the same line, evidences of gross carelessness will be found in children of all ages holding the surgeon's cards, but without any personal evidence of ever having been vaccinated; and, in the case of adults, not revaccinated since infancy, but similarly equipped with cards to secure them, in several languages, 'against detention on railroads in the United States.'

"The steamship medical service is not yet by any means what it should be in its treatment of immigrant passengers with regard to the preservation of health. In the absence of any adequate national legislation prohibiting the introduction of foreign pestilence, and the want of proper State and local legislation, I know of no better method of securing a better result, under present conditions, than by giving publicity to the character of the work done by each surgeon, as shown in the condition of the immigrants passing through his hands and arriving in the interior."

Experience in this service suggests the statement that the most notable line for disregard of vaccinal protection of its passengers is the American of Philadelphia, the number of unprotected by this line being far in excess of any other; in one instance twelve passengers out of fifty by the steamer Pennsylvania, of this line, were found totally unprotected, never having been vaccinated at all, yet every one had been furnished a steamship protection card.

The difference in passengers arriving by vessels of the same line at Boston and at New York is noted by one inspector, and the better condition of those arriving at Boston is attributed to the character of its inspection service. Only one case of small-pox — a mild varioloid — attributable to Boston, has been observed in Illinois in something over a year.

An increasing number of emigrants, the evidence goes to show, are vaccinated or revaccinated just before sailing, and this is especially true of the English and Scotch emigrants. Vaccination performed at this time, it is suggested, has the advantage of enabling the steamship surgeon to judge of its effectivness during the voyage; and it would be a decided improvement on the present general plan of waiting until the last days of the voyage, if the surgeon would perform the operation as soon after leaving port as practicable. This would give him an opportunity of noting the value of the virus and result of his work, besides facilitating the labor of inspection upon and after arrival. A circular letter from the Board making this request of the managers of the various steamship lines would meet, it is thought, with a favorable reception.

The disparity in the results of vaccination performed on shipboard is due, possibly, as much to the method of performing the operation as to the character of the virus employed, though there is doubtless much of this used which has become inert, either from being kept too long or from exposure to the salt moist atmosphere. Both of these evils would be more likely to be remedied if the surgeon was able to follow up the results of his work.

Dr. Rauch refers with satisfaction to recent action in England which should lighten the responsibility of the Inspection Service. An inquiry has been opened at Liverpool by one of the inspectors of the local Government Board and a representative of the Board of Trade with regard to certain sanitary questions connected with emigration, and to the circumstances in which emigrants passing through the port of Liverpool are placed before sailing. The same commission was instructed to inquire as to the provision made for the isolation and treatment of sick persons arriving from infected places on the Continent or in the United Kingdoms; and, further, as to the sanitary arrangements and supervision of the lodging-houses into which emigrants are received, and the means taken with respect to infectious diseases occurring therein.

The sanitary condition of the cars transporting immigrants from the sea-board has, as a rule, been found quite satisfactory, though in a few instances cars have been found wet and dirty, especially those transferred from connecting lines.

The number of immigrants inspected by this division of the Service during the month of September was 14,404, and the number vaccinated, 2918.

◆

J. T. CLOVER, F. R. C. S., ENG.

The name of Mr. Clover is familiar to all English speaking surgeons as the chloroformist to various London hospitals, and as the inventor of an exhausting bottle for the removal of calculus *débris* after lithotrity. The *Lancet* of October 7th records his death, and gives details of his life, which cannot fail to be of interest to all men interested in honest work, especially when accomplished under the burden of ill health.

Joseph Thomas Clover was born in Aylsham, Norfolk, in 1825. His first medical studies were pursued in Norwich, and in 1842 he became a dresser in the Norfolk and Norwich Hospital. It is probable that the chronic pulmonary disease from which he suffered, and which marred his whole life, began at this time, as the hospital book shows that he was absent from ill health nearly four months. Subsequently he pursued his studies at University College, London, where he was regarded by his fellow-students and teachers as one of the most promising students of his time. After filling various minor positions he was elected house-surgeon to Mr. Morton and afterwards to Mr. Syme. On the return of the latter gentleman to Edinburgh, he showed his appreciation of his house-surgeon by offering him a similar position at the Edinburgh Royal Infirmary, which Mr. Clover declined. It was during his residence that anæsthesia was introduced, and it is probable that he was present in the theatre of the University College Hospital during the performance of the first successful operation under ether in England; and, if the scene impressed him as profoundly and vividly as it did others, it might well incite him to thought and study. The operation was a thigh amputation. Mr. Squire administered ether; the patient inhaled it without a movement; Liston, with the rapidity of a surgeon accustomed to spare his patient every second of suffering, removed the limb in thirty seconds, and the ominous silence of the patient, so unusual in those days, caused anxiety for his life. "Presently he awoke, and when the cloth was removed from his stump, and he saw that his leg was gone, the unbounded wonder and delight of the patient was scarcely greater than that of the spectators. The great surgeon was almost overcome with joyful emotion as his mind grasped the full meaning of this new era in surgery," which had just opened with such a startling and complete success.

In 1853 he settled in practice in Cavendish Place. Work came to him quickly, and had he enjoyed a fair measure of health he would doubtless have gained a high position among the surgeons of his day. Frequent attacks of ill health, however, compelled him almost to relinquish ordinary practice, and hence it was that he restricted himself — we can but believe with some regret — to the administration of anæsthetics, and he soon came to take a prominent part in the development of this discovery. Chloroform had already supplanted ether in England. Its danger soon showed itself by fatal accidents, and Clover applied himself to the task of discovering a means by which its vapor could be safely administered. He constructed a bag which was used by the chloroform committee of the Medico-Chirurgical Society during their experiments. Mr. Clover was appointed chloroformist to the Westminster, University College, and the Dental Hospitals, and was the companion in operative cases of many of the chief surgeons of London. When other agents were brought forward as anæsthetics he was always interested in testing their merits.

Best known, certainly in America, among his improvements in other branches of surgery is his exhausting bottle, which was an improvement upon the idea of others, and has since been improved upon and its use prolonged by Bigelow until all the stone is removed at a single sitting.

"Every man has some few prominent points of character which give a tone to his whole life. These, in Clover, were his gentle modesty, his absolute unselfishness, and his active sympathy with the joys and sorrows of others. He had no 'push,' no ostentation, or love of display. He worked steadily; his happiness consisted in honestly doing the duty which lay clear before him. None ever heard him speak harshly or unfairly of any; he was without guile or bitterness. He had hosts of friends, for he made many and lost none. 'His end,' writes Dr. Sydney Ringer, his constant friend and medical adviser, 'was quite in keeping with his whole life, — gentle, amiable, uncomplaining, grateful to the last. The world wants one true man since he was taken away.'"

MEDICAL NOTES.

— Those who enjoy an apt quotation will appreciate the felicity of the words with which an English physiologist closes some remarks on the Anti-Vivisection Act. Repelling the charge that such experiments, when conducted with a thoughtful and intelligent purpose to advance the sum of human knowledge, and thereby to further the philosophical treatment of disease, are "inhuman" or "unchristian," he concludes in substance, "Nor can I believe that such studies are contrary to the spirit of Him who sacrificed a whole herd of swine that one human being might be restored, and who said 'Ye are of more value than many sparrows.'"

— Strong claims are made by Dr. Charles Taylor in the *Australasian Medical Gazette* (*Practitioner*, September, 1882) of the success of treatment by injection of pure fluid carbolic acid, five or six drops, into the substance of carbuncles. Also by Dr. Morse Taylor, of the United States Army, in the *American Journal of the Medical Sciences*, April, 1882, for the same treatment in bubo. He uses, instead of the pure acid, ten to forty minims of a two per cent. solution. In each case the injection is made directly into the inflamed tissue, and an abortive action is claimed to be the rule when suppuration is not already too advanced.

— The *Archives of Dermatology* contains an account of a fictitious eruption in a hysterical young woman. The efflorescence was encrusted, and was in parallel lines. It had been presented by its owner in many hospitals and dispensaries. Suspicion of its cause led to examination of the patient's nails, which were found to be bitten off. It was, however, discovered that the appearance was produced by rubbing the skin with the finger-tips for an hour or more at a time. The patient alleged that it was the pleasurable titillation rather than any intention to create surprise or sympathy which led her to do this.

— Edward King, in the *Boston Journal*, writes of the morgue connected with the monastery of St. Bernard, where the bodies of persons who have been lost in the pass are brought for the chance of identification. "Here is death without decay; here, in this wondrous air, on this pass, more than eight thousand feet above the sea level, putrefaction is unknown, and bodies found in the snows in winter, or after the white shroud has melted away from the bosom of Nature in the spring, are preserved entire so long as the monks care to keep them." Only on an occasional day, when it is a little warm, is there the slightest odor, and that hardly a reminiscence of decay. The spot remains covered all winter in some years, and when it is opened in the spring no change can be seen in the bodies, which are simply dessicated like mummies. At long intervals, when the morgue becomes full, the bodies are carried down into the valley for burial. It is, indeed, a better place for the dead than for the living, as it will be remembered that the average duration of life among the monks after they are assigned to that post is only something like three years.

— The *Sanitary Engineer* expects to hear something equivalent to the following colloquy in the hygienically constructed sea-side hotel of the future: "Anxious guest to hall-boy: 'Boy, where are the water-closets?' 'Hain't got any, sir; they breeds fever. Boat goes down the harbor every morning. Ladies at nine, gentlemen at ten.' 'Well, is dinner ready?' 'No, sir. We always carbolize the dining room before meals. Now they are spraying the waiters, sir.' Impatiently: 'Well, where is your ice water?' 'Don't have drinking water now, sir. 'Tain't healthy. Yonder's our Labarraque mixture flavored to taste. Have a glass, sir?' Guest retires and takes a thymolized julep."

— An Illinois farmer went to a "dance" and partook of considerable liquor. The next morning while he was sleeping it off, a blue-bottle fly found her way into his nostril and deposited her eggs, attracted possibly by an ozæna from which the man was suffering. In due course of time some sixty-five maggots came into existence, and for a week or more ran riot through the various meatuses and sinuses that were accessible. Œdema of the naso-pharynx, causing considerable obstruction to the respiration, and facial erysipelas combined to add to the attractiveness of the picture; but the man finally recovered.

— The most successful results ever attained in the Maternité Hospital in Paris (a mortality of only three quarters of one per cent.) have been reached in the new pavilion, of which M. Tarnier says: —

> Each patient there has a separate room, entered from without, so that a nurse can only pass from one to another by going outside into the open air. The furniture is of japanned iron; the floors, walls, and ceilings are of impermeable concrete. The mattresses and pillows are stuffed with cut chaff, which is burnt after use in every single case. For the McIntosh sheet is substituted one of brown paper, made impermeable by pitch; this is burnt after use. For the washing of the genitals weak solutions of bichloride of mercury are employed, as being the best and most powerful germicide.

The same enthusiastic accoucheur has invented a sort of incubator in which babies of an age heretofore considered non-viable are placed. This machine consists of two compartments, the lower containing hot water to furnish the heat, and the upper for the reception of the child, where he is enveloped in cotton and under a glass cover. The results are said to be very encouraging.

— In the July number of *Good Health* it was represented that the health of the Chinese residents of San Francisco was better and the death-rate lower than among the white inhabitants. This is denied by Dr. Hatch, the medical officer of the State Board of Health of California, who says that the death-rate among the Chinese population in 1881 was 21.77 per 1000, while among all the other nationalities in the city it was 17.20 per 1000, and this notwithstanding the fact that the Chinese population was composed almost entirely of adults. Besides contradicting the facts alleged he denies the reason given, namely, their personal habits of cleanliness, saying that to those familiar with the actual state of things such assertions must seem like a practical joke. So far from their living hygienically, he says: —

> "This excess of mortality among the Mongolians is to be attributed mainly to their mode of living, their disregard of sanitary rules, the wretchedly-crowded tenements, the damp, close, and disgustingly-filthy cellars, in which many of them live."

NEW YORK.

— Another of those wretched attempts to hold a dead body for debt was recently made by an undertaker in the case of a woman who died on Madison Street, against whom he had some old claim. The funeral having been delayed for twenty-four hours, the matter was brought to the attention of the Board of Health, and Dr. Nagle, registrar of vital statistics, immediately wrote to the undertaker, reminding him that his action was illegal (constituting a misdemeanor under the law), and commanding him to bury the body at once, or else deliver it and the certificate of death and deed of the grave to the family, so that another undertaker might be employed. The result was that the funeral was no longer delayed.

— Dr. J. Foster Jenkins, the most prominent physician of Yonkers, on the Hudson, died on the 9th of October, and his funeral from St. Paul's Church at that place on the 12th was very largely attended by the profession and the community at large. He was an active member of the New York Obstetrical Society, whose meetings he seldom missed, and of the State Medical Society, of which a few years ago he was chosen president.

— At Bunnell's Museum, on Broadway, can now be seen Carlo Benedetti, "the Swedish phenomenon," who is able to pass swords and other murderous steel weapons into his œsophagus for a distance of two feet and more with impunity. There is said to be no trickery about his performances, and one of his most extraordinary feats is to take a musket weighing fifteen or twenty pounds, with a bayonet sixteen inches long, and, inserting the latter up to its hilt into the œsophagus, support the musket above it without touching his hands to it. The man was born in Nordkoping, Sweden, in 1849, and he was twenty years of age when he made the discovery that he could pass various articles down his throat without injuring himself. In May, 1874, an investigation of his case was made at the Jefferson Medical College, Philadelphia, the examination being conducted by the late Dr. F. F. Maury, assisted by Professors Gross, Wallace, and Pancoast. Among the feats that he performed on this occasion was the passing of a regulation Spanish sabre, with a blade twenty-nine inches long, its full length into his œsophagus and stomach. The end of the sabre could be distinctly felt below the level of the umbilicus on the left side, the pressure causing him some inconvenence, but no actual pain, and it was the opinion of the medical men present that the blade displaced the stomach partially, tilting it and pushing it downward.

— A meeting of the Section of Practice of Medicine of the New York Academy of Medicine was held October 17th, when Dr. E. C. Seguin read a paper on Myelitis following Intoxication by Paris Green (arsenical paralysis). One of the practical points brought out in it was the possible danger of giving large doses of arsenic in chorea, as was so commonly done.

— Dr. L. Duncan Bulkley commenced on the 11th of October his annual free course of lectures to practitioners and students, at the New York Hospital, on diseases of the skin, including syphilis. The first half of the hour each week is devoted to a didactic lecture illustrated with fine wax models, colored plates, etc., and the second half to clinical teaching.

— At the seventy-seventh annual meeting of the County Medical Society the following officers were elected: President, Dr. David Webster; Vice-President, Dr. Andrew H. Smith; Secretary, Dr. Wesley M. Carpenter; Assistant Secretary, Dr. Charles H. Avery; Treasurer, Dr. O. B. Douglas.

— On the 10th of October an insane Frenchman rushed through Fourteenth Street, which was at the time crowded with ladies, shopping, and assaulted with a sharp-pointed compass all the females at whom he could get a chance, and one of his victims, the wife of a police officer, has since died in consequence of the injuries thus received. At the autopsy it was found that death was due to secondary hæmorrhage. The wound was directly over the fifth rib, and the point of the instrument was found to have entered the wall of the heart and pierced a branch of the coronary artery. It seems that on the 15th, five days after the wound was inflicted, hæmorrhage set in, and caused death by filling the pericardial sac with blood, and producing collapse. In speaking of this rare occurrence, the deputy coroner, Dr. Philip E. Donlin, remarked, "I know of no case of death by secondary hæmorrhage due to an injury of the coronary artery. When the compass was being withdrawn the artery must have been twisted, and thus immediate hæmorrhage did not occur. After several days, however, the woman, who had suffered only from shock while in the hospital, became more active, and the renewed pressure on the artery caused by her thus moving about, in addition to the changes taking place in the process of reparation, opened the vessel afresh, with the result of fatal hæmorrhage." In another case that Dr. Donlin recalled the patient went about for a week with a bullet in his heart, but in this instance the immediate cause of death was shock and not hæmorrhage.

— The late Thomas Clark, of Buffalo, bequeathed to the Buffalo General Hospital and the hospital of the Sisters of Charity in that city each the sum of $5000.

Miscellany.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE tenth annual meeting of the Public Health Association held its first session at Indianapolis, on Tuesday morning, October 17th, the President, Professor R. C. Kedzie, of Lansing, Michigan, presiding. About sixty members were present.

The secretary, Dr. Azel Ames, Jr., of Wakefield, Mass., reported, for the Executive Committee, in regard to procuring an act of incorporation that after examination of the laws of the several States, and of the United States, they were unanimously of the opinion that the United States laws offered the best inducements to the Association, and the sub-committee was instructed to cause an act to be secured. They therefore ask for further time. Adopted, and further time given.

The secretary also stated that he was directed by the executive committee to announce that the committee has directed the president, subject to the approval of the Association, to fill such vacancies as shall occur during the meeting in the advising council by members who are present. The Association approved the order.

The special committees on Prevention of Venereal Diseases, Management of Epidemics, and other topics, were called, and, not being ready to report, the time for doing so was extended.

NATIONAL MUSEUM OF HYGIENE.

The committee on the National Museum of Hygiene reported through their chairman, Dr. Albert L. Gihon, United States Navy. After quoting the resolutions of the American Medical Association, and the circular of the Surgeon-general of the Navy announcing the establishment of the museum, and explaining the scope of the enterprise, the committee expressed the hope that each member of the Association will feel a personal interest in the success of the museum and library, and will manifest that interest by contributing and inducing others to contribute to their growth, and they suggest the establishment of a permanent committee, to be entitled The Committee on National Museum of Hygiene, to be the medium of communication between the Surgeon-general of the Navy and the officers and members of the Association, to be specially charged with the dissemination of information respecting the museum, and with the collection and transmission of such contributions as the Association may desire to have deposited.

THE NEWPORT SYSTEM OF SANITARY PROTECTION.

The first paper on the day's programme was that by Dr. Horatio R. Storer, of Newport, R. I., on The Newport (Edinburgh) System of Sanitary Protection. In the absence of the author, it was read by Dr. Gihon.

Dr. Storer briefly refers to the first conception of the new principle in sanitation termed Protection, which is based on individual organization made collective upon the principle of mutual life insurance, by Prof. Fleming Jenkin, of the University of Edinburgh, in April, 1878, and its immediate introduction into this country, at Newport, R. I., in November of the same year. Its early bibliography, both in Scotland and the United States, is then given. Four years had now elapsed since the commencement of the Newport experiment, now such no longer. The system had early been successfully copied at Lynn, Mass., and subsequently at Trenton, N. J., Brooklyn, Savannah, Montreal, and other cities and towns. As had been anticipated, very great aid could be given by protection associations to local, State, and even the National Board of Health, and hearty acknowledgments to this effect were quoted from the National Board of Health Bulletin for November 27, 1879, and from the Third Annual Report (1881) of the State Board of Health of Rhode Island. This latter board speaks with strong approval of the plan of organization, the *personnel* and the immense amount of public, as well as private, work that has been accomplished by the Newport Sanitary Protection Association. The Newport Association from the outset had labored first, foremost, and all the time for a City Board of Health, distinct from the aldermen. As yet its efforts have been unsuccessful, but the local public sentiment had been so enlightened, and so great a moral pressure had been brought to bear upon the city, through the daily and professional press of the whole country, that not only was the special change desired now close at hand, but there had arisen a demand for other municipal progress, general and far reaching in its scope.

Detail was then given of certain measures employed by the Association for insuring complete inspection of the houses occupied by permanent residents and transient visitors, and a digest of the public and private work accomplished during the past year. There was also appended the report rendered to the Association upon the dangers of impure ice, by Professors Pumpelly and Hills, of Harvard University, and Dr. Storer. The source of the whole ice supply of Newport was found polluted by the overflow of several cesspools, and the experiments made by the chairman of the committee proved most conclusively that during the congelation of water its impurities are collected together, concentrated, and intensified in the resulting ice. The Association therefore enjoined upon the Newport Ice Company to either protect its pond or discontinue using it. The former course was very sensibly adopted by the construction of an expensive intercepting sewer, to the very great advantage and enhanced safety of the whole city of Newport.

Dr. Thad. M. Stevens, of Indianapolis, read a paper on The History of Health Work in Indiana to Date, in which the organization of the State Board of Health was set forth.

At the evening session an address of welcome was delivered by Mayor Grubbs, who spoke of the vital importance of sanitary matters to all large cities, and expressed his opinion of the character of the work done by the members of the Association by a quotation slightly changed from the original: —

> "Heaven's gate is closed to him who comes alone,
> Save thou a life, and thou shalt save thine own."

Governor Porter followed, commencing his remarks by saying: "To see the most intelligent members of a profession whose income is derived from fees for curing diseases assembled to consider with real earnestness the most efficient means of preventing disease, is an inspiring spectacle. An Association formed for such a purpose should be warmly welcomed alike by the State and by the municipality in which it is met." With an additional recognition of the work done by others than medical men, and a glimpse at the vast field open for sanitary work, he closed with a cordial welcome on behalf of the State.

Professor Kedzie, the President, then delivered the

ANNUAL ADDRESS.

He first paid an eloquent tribute to the late Dr. Charles B. White, of New Orleans, last year's President of the Association, and then proceeded to the subject proper of the address, of which the following is a brief abstract: —

Sanitary science includes everything that can prevent disease, and thus promote the public health. The public health is not an entity apart and by itself, but is the aggregate of the health of the individuals of a community. Any means that will promote the public health will correspondingly increase the well-being of the largest number of individuals. The subject of public sanitation, which implies preventive medicine in its widest sense, touches every hearth and home in the country. Its end is to improve and to preserve man's body in the best condition, and through it his immortal part. The body of man, says Dr. Ackland, is not only the casket which contains the soul. It is more, — it is a casket which, under certain conditions, moulds and modifies the soul.

If the sanitarian is working for noble ends by unselfish means, let him not therefore suppose that he will be exempt from the imputation of sordid motives, or that he will at once be hailed as the benefactor of his race. Human nature resents the assumption of moral excellence. "Every man's work shall be tried by fire of what sort it is," and he who acts from motives that seem a rebuke to selfishness, will be subjected to the ordeal of a furnace heated sevenfold.

He will sometimes be associated with men who bring discredit upon the cause, for the reason that they do not themselves rise to the level of the greatness of the work. In the words of an eminent sanitarian, "Many modern sanitarians, with but a smattering of knowledge, and with imperfect powers of reasoning, have done much to throw ridicule upon a great subject. But this was to be expected. In every department of human knowledge there have been, and still are, camp-followers of science more ready to theorize than to investigate, whose dogmatism is only equaled by their ignorance, and who have adopted some special line of investigation without any previous training or discipline. These men, in the words of Curran, 'hop with airy and fantastic levity over fact and argument, and perch on assertion which they call conclusion.'"

In the next place the good to be secured by sanitary science will be questioned, and its benefits denied. As a sample of the skepticism which waylays scientific progress, there has been going the round of the newspapers a statement that the improvement effected by science consists in a prolongation of the passive endurance of life rather than an extension of the period of true vitality or any increase of the opportunity for good work and real intellectual enjoyment.

The object of sanitary science is not to spin out existence when all the light and joy of life are fled, but rather to make existence so full of life that the suicidal suggestion, "Is life worth living?" shall never enter the human soul. The man who prevents disease is not to be mistaken for the valetudinarian who spends life in dodging death.

Let us now turn our attention to vital statistics to determine whether the advance in health and the enlargement in life is real progress or only a hallucination of wild enthusiasts.

REDUCED DEATH-RATE.

The report of the Registrar-general of England shows that the death-rate in twenty-three and a half years has been reduced 12.2 per cent. in urban, and 8.5 per cent. in rural districts. This is a grand showing of the results of sanitary progress. But these estimates of the Registrar-general relate to human life in gross, and give us no comprehension of the condition of the different epochs of life. Life may be drawn out into attenuated helplessness without any increase of human happiness.

By a study of the reports of the Registrar-general of England for forty years, I find that the number who complete adolescent life by surviving the twentieth year has been increased 12.6 per cent. in forty years; that the number who enter adult life, and pass from twenty to thirty-five years, has been increased 12.2 per cent. In other words, in a given population where eight persons passed from childhood to manhood forty years ago, more than nine now join the ranks of productive manhood; where eight persons survived fifteen years of active toil, nine persons now attain the same age. This is something vastly more significant than a mere extension of life in gross; it is an addition in particular to that period of existence when the real work of life is done.

When we regard the causes of death we find the same evidences of progress. Two hundred years ago small-pox was the cause of death of 96 out of every 1000 deaths in England, and 66.5 out of every 1000 deaths in Germany. Now the mortality from small-pox is less than 1 in 1000. Sanitary science has thus saved 95 deaths in every 1000 in England, and 65.5 in Germany. The saving of life by vaccination every year is equal to one tenth of the standing armies of Europe. In Mexico three and one half millions perished by one visitation of this fell disease. If one hundredth part of this number should now die in any nation by a single epidemic, the world would stand aghast in horror. The black death that slew 25,000,000 in Europe is a thing of the past, and will never again be possible until sanitary science is forgotten. Other diseases less amenable to control have been checked, if not exterminated. Within thirty years the number of deaths from typhus, typhoid, and continued fevers, has been reduced more than one half.

The improvement of all the lower forms of life, both animate and inanimate, has been the result of direct interference on the part of man. If man would give a corresponding attention to the development of his own race by careful attention to the laws of heredity and a wise control of his environment, might not as striking results be secured in human development as already have been secured in stock-breeding? The complete realization of this is hardly to be expected. But the environment, at least, is within man's control, and he may thus secure that "continuous adjustment of internal relations to external conditions in which healthy life consists."

THE OUTLOOK OF SANITARY SCIENCE.

With reference to preventive medicine, we may appropriately utter the challenge of the old Hebrew bard: "Watchman, what of the night?" and, as in the days of old, comes back the response, "The morning cometh, and also the night." There are signs of encouragement and cheer for the race, like the breaking of the morning, and also signs of discouragement and failure.

Among the causes for hopefulness for the immediate future are the following:—

(1.) Extension of the knowledge of the causes of zymotic diseases, such as charbon (or splenic fever) and chicken cholera in domestic animals, and of diphtheria in human kind.

(2.) The prevention of these diseases by extension of the method of inoculation. This has been done in some diseases of domestic animals. If by similar means measles, diphtheria, and scarlet fever can thus be brought under control, how many a Rachel, now weeping beside her childless cradle, will be comforted?

(3.) The discovery of the bacillus, which is the cause of consumption, by Dr. Koch, of Berlin, marks an epoch in the history of medicine. It is yet too early to say how much immediate benefit shall spring from this capital discovery, but any means which shall bring within our control, even remotely, this fell destroyer of our race, is full of promise.

(4.) The wide interest now taken in questions of public health.

(5.) The increase in the number of State Boards of Health and other organizations with the same object.

DISCOURAGEMENTS.

A most important cause of discouragement is found in what may be called the hostile indifference of Congress and the executive to the National Board of Health. The American Public Health Association and the Sanitary Council of the Mississippi Valley were active in securing the organization of the National Board of Health. Both the Association and the Council are firm believers in the need of a National Board of Health, whose jurisdiction shall be conterminous with the national boundaries. When destruction takes on winged form and comes floating on the very winds to lay waste our heritage, then we want some power whose jurisdiction shall command every force requisite to withstand the invading foe. Look at the situation. Small-pox has been pouring in with the flood of European immigration, and but for the timely action of the National Board of Health, and the efficient aid of a few State Boards of Health, the Northwest would have been one widespread hospital for small-pox, and the commerce of this vast region closed for a time. Yellow fever has been flickering along our Gulf borders, and lately has blazed up into an epidemic, wasting large communities with sickness, and crippling the commerce of our Gulf coast — inflicting a money loss exceeding tenfold the entire cost of the National Board of Health, to say nothing of the suffering and death thus entailed.

When we look to the future the prospect is not reassuring. The same destructive agencies will continue to work in the future as have in the past. When we turn our eyes to the East we find additional cause for apprehension. Cholera has roused up from its lair in the jungles of India; is now laying waste the islands of the Indian Ocean, and will soon start on its sweep westward to lay waste Europe, to charge across the stormy Atlantic, and, like its predecessors, to die out in the valley of the St. Lawrence or along the banks of the Mississippi. Is this a time to withdraw the watchmen who guard the public safety, to call in our trusty picket line and hope to meet the destroyer with the *fulmen brutum* of States' rights, or the guerrilla warfare of isolated municipal action?

The painful conviction abides with us that a fearful blunder has been made in thus crippling the National Board of Health, and that we have been guilty of the folly of changing front in presence of the foe.

We thus see that light and shadow alternately flit across our landscape, but the light grows stronger and the shadow less sombre. Whatever we may contribute towards improving the condition of our race will be a permanent addition to the welfare of our kind, while our errors and mistakes, like dead leaves and useless chaff, will be mercifully buried in our graves. We are now painfully and wearily sowing the seed, but the generations to follow us shall reap the joyful harvest. Though our eyes shall never behold the sheaves of that far-off summer time, our ears may yet catch the echoes of their harvest song: "There shall be no more thence an infant of days; nor an old man that hath not filled his days, for the child shall die an hundred years old." By the advancement of sanitary science and the stricter enforcement of sanitary law, the proportion of "infant of days" has been steadily diminished, and a constantly increasing number pass on into adult life. Year by year and age by age a smaller number die in infancy and a larger proportion pass forward to productive manhood. With wider knowledge, and more general enforcement of sanitary law, this diminution of infant mortality and expansion of human life will go forward with ever-increasing momentum till life will attain its normal limits, and every child shall reach his hundred years. Not only will life be extended, but the long life will be full of joyful activities, and man shall fill his days. For this we toil and hope.

◆

ALARMING SYMPTOMS FROM EIGHT GRAINS OF POTASSIUM IODIDE.

DR. J. R. WEIST in the *American Practitioner* relates an instance of marked idiosyncrasy with reference to this drug. The patient was a well-developed female, unmarried, twenty-eight years old. The attendant apparently suspected syphilis, and ordered a mixture containing eight grains of potassium iodide in each dose; the mixture was composed of the iodide, syrup, and water. One dose of the medicine was taken at eight P. M. In less than an hour disagreeable symptoms appeared about the mouth and throat; these increased in severity and new ones were added. At eleven o'clock, three hours after the medicine was taken, the symptoms became alarming; the pulse was sixty and full; the axillary temperature 95° F.; face pale; slight œdema present over nearly the entire body. The face was markedly œdematous, especially the upper eyelids, which were so swollen as to render opening the eyes impossible. There was an abundant secretion of viscid saliva, from which the mouth was cleared with great difficulty. The mucous membrane of the nose was so swollen as to make it impossible to force air through the nasal passages. The lips, tongue, uvula, and soft palate were all greatly enlarged. There was nausea but no vomiting, and much pain throughout the entire abdomen. Respiration was greatly embarrassed, apparently because of œdema of the laryngo-tracheal mucous membrane. The patient would every minute start up in bed and toss the arms wildly about in her struggle for breath. The articulation was so impaired that it was with difficulty she made herself understood. The hypodermic use of one fourth grain morph. sulph. greatly relieved the respiration. The hypodermic injection was repeated in three hours, and the symptoms of poisoning gradually disappeared, although at the end of twenty hours after taking the iodide, there was still great suffering, the eyelids presenting great swelling. In seventy-two hours all the apparent effects of the medicine had disappeared. As a matter of experiment this patient, one week after her recovery, was given *one grain* of potassium iodide, and in two hours all the symptoms recorded above, but in a much less degree, were present. These disappeared within twelve hours. A quantity but little greater than the dose first prescribed of the medicine would, in the opinion of the author, have destroyed the patient.

◆

THE CEPHALIC MURMUR.

DR. GIBSON, in the *Birmingham Medical Review* for October, presents a contribution on this subject. After examining the views of other writers and showing that this murmur is not characteristic of brain diseases in children, is not physiological in children, and is not, in fact, peculiar to children at all, he proceeds to give in detail five cases where he found it. These were (1) a strumous boy of five years; (2) a chlorotic female of sixteen; (3) a married woman of thirty-six, with menorrhagia and anæmia; (4) a man of forty-six, complaining of hæmorrhoids, and (5) a man of sixty, suffering with omental cancer.

These patients were alike in one particular, namely, anæmia, and all had a marked venous hum in the neck. Some had in addition cardiac murmurs, mostly hæmic.

The cephalic murmur, which was systolic or slightly post-systolic in rhythm, was heard most distinctly over the orbit, also over the mastoid and occipital regions. The author differs from Tripier, who considered the murmur to be produced in the internal carotid, and to be due to relative stenosis, believing it to be of venous origin. The grounds upon which this theory is based are stated as follows: —

"If the murmur originated in the terminal parts of the internal carotid system, it should be found to wane in intensity with distance from that system. It is not so, however; as above remarked, the occipital is usually more distinct than the mastoid murmur.

"The position of the greatest intensity of the mur

mur is of great importance. It is most clearly heard over the orbit, the mastoid eminence, and the occipital protuberance. This fact furnishes a key to the question. These three situations are closely related to the cavernous sinus, the lateral sinus, and the torcular herophili; and I am of opinion that the murmur is produced by fluid veins within these sinuses; in other words, the murmur is of venous origin. It will at once be said that the murmur ought to be continuous, like the *bruit de diable*, if it arises from vibrations of the fluid contents of these venous channels. But, as in the case narrated, the venous hum is frequently found to have systolic augmentations of intensity. These are caused by the pressure of the large arteries on the venous trunks during the distension of the arterial walls, consequent upon the cardiac systole. This pressure creates additional waves in the contents of the veins, and the acoustic expression of these waves is increased intensity of sound. The internal carotid artery is in very intimate relationship with the contents of the cavernous sinus, being practically surrounded by the venous blood. When the anæmic condition is present, therefore, with its predisposition to the generation of intra-venous ripples, the pulsations of the artery excite fluid veins in the blood contained within the sinus. In this, I think, we have a sufficient cause to account for the production of the orbital murmur; and similarly we may account for the occipital and mastoid murmurs. The internal jugular vein, at its origin and in its upper part, is so closely connected with the internal carotid artery, that the shock of the arterial pulsation is always communicated to it. Hence, in the anæmic state, fluid waves are transmitted upwards to the blood within the cranial sinuses, and cause a murmur in situations where the vibrations come to a focus."

The conclusion of the author regarding the clinical significance of the murmur is that it is invariably associated with the anæmic state. Several of the authors referred to report its presence in healthy children, but allow that it is more common in those suffering from rickets and similar affections. Tripier has never found it in any healthy adult, and, on a careful review of the whole facts of the case, it seems that the cephalic murmur entirely depends upon the anæmic condition of the patient, and that, like the venous hum, which may now and then be found in those apparently quite healthy, it is a sign of anæmia.

◆

TRANSPOSITION OF THE VISCERA.

A CASE of transposition of the viscera was presented before the College of Physicians of Philadelphia recently, occurring in a young man, who died at the age of twenty-one of purulent peritonitis, the cause of which was not stated in the report. The individual was left-handed, and the right testicle hung lower than the left. The cardiac impulse had been noticed to the right, and percussion ante-mortem had revealed the probable transposition of the liver and spleen. The external appearances (except for the testicles) were normal.

The autopsy showed the heart in the right of the thorax but otherwise normal, the right being the pulmonary and the left the systemic side. The arch of the aorta crossed the right bronchus, and the vessel then descended on the right side of the spine. The innominate artery was on the left, giving off the left common carotid and left subclavian, while the right carotid and subclavian came directly from the right portion of the arch. The right lung was the smaller and had two lobes; the left had three. The liver occupied the left hypochondriac and, in part, the epigastric regions, and its lobes, as well as the gall bladder, were similarly changed. The stomach was chiefly in the right hypochondrium, the pylorus extending toward the middle of the abdomen. The spleen was on the right and attached to the greater curvature of the stomach. The cæcum was in the left iliac fossa; the transverse colon ran from left to right and descended to the sigmoid flexure which was upon the right.

◆

THE CURABILITY OF EPILEPSY.

DR. FERRAND has presented a thesis on the results of treatment of epileptics in the Salpêtrière, in which eighty-nine cases are reported treated with bromide of potassium. Twelve cases were decidedly benefited, fifty-one were improved, sixteen slightly benefited, and ten received no benefit whatever. The manner of administering the bromide is important. At first two or three grammes are given daily, increasing the dose every fifteen days or every month, until the daily quantity reaches, for women, five or six grammes, and for men six or eight grammes. The use of larger doses than this is severely criticised. Opinions differ as to whether the bromide ever cures epilepsy. Dr. Ferrand finds that many of the accompanying troubles are much modified, such as the nervous state, maniacal delirium, and the insane impulse. The intellectual troubles are also influenced for the better. The most frequent ill results of improper methods of administration are headache, somnolence, impaired locomotion, gastric irritability, constipation, anæmia, feebleness, etc.

◆

RHEUMATIC LEUCOÏNOITIS OF THE PULMONARY AIR TUBES.

IN an article with the above title in the *American Journal of Medical Sciences*, Dr. Thomas H. Buckler advances the theory that the disease known as rheumatism frequently finds lodgment in the fibrous tissue which forms the chief part in the structure of the bronchi; that this is one of the points to which it goes by metastasis from other fibrous structures; that it causes cough without pain or expectoration or any of the physical signs of catarrhal bronchitis; that this cough comes and goes according to the shifting character of the disease, but that if long continued it gives rise to a form of pneumonia by obstruction of the interjacent pulmonary tissue, in which the consolidation is particularly dense; that in the absence of rheumatism elsewhere, a cough coming on after exposure to cold, and unattended with any physical signs of bronchitis, or with expectoration, may be considered to denote an idiopathic rheumatism of the fibrous tissue of the bronchi. A number of cases are cited of varying degrees of this affection, in some of which the lungs alone were affected, while in others the ordinary symptoms of rheumatism alternated with the cough, and in several the resultant rheumatic pneumonia occurred.

A paper by Dr. Bolles, published in this JOURNAL February 3, 1881, is reviewed at length, and it is claimed that some of his cases of pneumonia therein described are examples of the rheumatic disease.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 14, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from: The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	516	199	27.41	11.19	13.12	2.90	3.86
Philadelphia	846,984	298	100	18.12	4.36	—	4.02	11.06
Brooklyn	566,689	226	112	28.29	10.17	12.93	.44	6.63
Chicago	503,304	166	77	24.68	6.62	10.23	6.02	7.83
Boston	362,535	180	55	21.64	8.32	8.88	7.77	4.44
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	143	65	38.45	.70	3.50	4.19	17.58
Cincinnati	255,708	113	52	19.20	1.04	.48	—	.40
New Orleans	216,140	137	38	22.63	2.19	6.57	.73	1.46
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	55	—	30.91	10.91	3.64	16.36	5.45
Buffalo	155,137	79	35	34.16	10.12	10.12	7.60	9.86
Milwaukee	115,578	55	33	41.81	5.45	12.72	1.82	3.64
Providence	104,857	40	9	22.50	7.50	12.50	5.00	—
New Haven	62,882	15	1	13.33	6.66	—	6.66	6.66
Charleston	49,999	34	9	5.88	8.82	—	5.88	—
Nashville	43,461	21	8	14.28	—	9.52	—	4.76
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	23	8	30.38	17.36	—	13.02	4.34
Cambridge	52,740	27	8	14.80	7.40	—	7.40	7.40
Fall River	49,006	22	8	45.45	4 55	27.27	4.55	4.55
Lawrence	39,178	13	4	15.38	—	—	—	7.69
Lynn	38,284	9	5	22.22	—	22.22	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	10	4	—	—	—	—	—
New Bedford	26,875	7	1	—	14.28	—	—	—
Somerville	24,985	3	1	33.33	—	—	—	33.33
Holyoke	21,851	6	1	66.66	16.66	—	33.33	16.66
Chelsea	21,785	7	3	28.56	—	14.28	—	—
Taunton	21,213	6	—	33 33	—	—	16.66	—
Gloucester	19,329	7	3	28.56	—	14.28	—	14.28
Haverhill	18,475	7	1	14.28	28.56	—	14.28	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	5	0	—	—	—	—	—
Newburyport	13,537	5	2	40.00	—	40.00	—	—
Fitchburg	12,405	3	2	33.33	—	—	—	—
Malden	12,017	2	0	—	—	—	—	—
Eighteen Massachusetts towns	136,698	42	11	14.28	7.14	4.76	7.14	—

Deaths reported 2282 (no reports from St. Louis and District of Columbia): under five years of age 755: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 579, consumption 323, lung diseases 175, diarrhœal diseases 186, diphtheria and croup 143, typhoid fever 94, scarlet fever 41, malarial fevers 36, small-pox 25, whooping-cough 23, cerebro-spinal meningitis 13, puerperal fever eight, measles six, erysipelas four, typhus fever one. From *scarlet fever*, Cincinnati 10, New York seven, Brooklyn six, Philadelphia five, Buffalo four, Pittsburg and Worcester two each, Chicago, Baltimore, Milwaukee, Fall River, and Chelsea one each. From *malarial fevers*, New York and New Orleans 12 each, Brooklyn nine, Baltimore two, Chicago one. From *small-pox*, Baltimore 12, New Orleans seven, Chicago four, Philadelphia two. From *whooping-cough*, New York 10, Brooklyn five, Buffalo two, Philadelphia, Chicago, Baltimore, Cincinnati, Pittsburg, and Milwaukee one each. From *cerebro-spinal meningitis*, New York and Cincinnati two each, Philadelphia, Chicago, Providence, Worcester, Fall River, Lawrence, Taunton, Fitchburg, and Chicopee one each. From *puerperal fever*, Chicago and Baltimore two each, Boston, Milwaukee, Providence, and Holyoke one each. From *measles*, New York five, Chicago one. From *erysipelas*, New York three, Brooklyn one. From *typhus fever*, Baltimore one.

Three cases of small-pox were reported in Cincinnati, Pittsburg two; diphtheria 38, typhoid fever 35, scarlet fever 18 in Boston; scarlet fever 29, and diphtheria 10, in Milwaukee.

In 35 cities and towns of Massachusetts, with a population of 943,536 (population of the State 1,783,086), the total death-rate for the week was 18.57 against 20.32 and 21.17, for the previous two weeks.

For the week ending September 23d, in 171 German cities and towns, with an estimated population of 8,482,268, the death-rate was 23.5. Deaths reported 3835: under five years of age 2051; consumption 427, diarrhœal diseases 268, lung diseases 254, diphtheria and croup 178, scarlet fever 111, typhoid fever 62, whooping-cough 58, measles and rötheln 32, puerperal fever 22, small-pox (Königsberg, Bonn, Koblenz, and Metz one each) four, typhus fever (Braunschweig one) one. The death-rates ranged from 11.0 in Karlsruhe to 37.4 in Frankfort a. O.; Königsberg 29.8; Breslau 33.2; Munich 21.2; Dresden 23.8; Berlin 26.4; Leipzig 18; Hamburg 18.7; Cologne 25.5; Frankfort a. M. 14.5; Strasburg 24.9.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending September 30th, the death-rate was 20.6. Deaths reported 3344: acute diseases of the respiratory organs (London) 300, diarrhœa 162, scarlet fever 130, whooping-cough 75, fevers 73, measles 49, diphtheria 37, small-pox (London seven) 10. The death-rates ranged from 13.7 in Derby to 32.6 in Preston; Sheffield 17.6; London 19.4; Leeds 20.3; Brighton 21; Plymouth 22.4; Birkenhead 22.9; Newcastle-on-Tyne 24.7; Sunderland 30.7. In Edinburgh 18; Glasgow 24.5; Dublin 23.7.

For the week ending September 30th, in the Swiss towns, population 494,390, there were 23 deaths from diarrhœal diseases, consumption 21, lung diseases 11, scarlet fever four, diphtheria and croup four, whooping-cough two, typhoid fever one. The death-rates were, at Geneva 10.3; Zurich 14.3; Basle 17.1; Berne 18.4.

The meteorological record for the week ending October 14th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
October, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 8	30.035	67	83	56	93	46	85	75	SW	SW	SW	6	10	10	F	C	C	—	—
Mon., 9	29.940	64	78	57	100	58	81	80	SW	SW	SW	8	14	12	G	C	C	—	—
Tues., 10	29.913	58	71	48	59	32	57	49	W	W	NW	14	15	8	C	F	C	—	—
Wed., 11	30.204	47	52	43	68	60	71	66	N	E	E	5	12	10	O	O	O	—	—
Thurs., 12	30.330	52	56	48	67	75	81	74	E	E	E	16	14	12	T	O	F	—	—
Fri., 13	30.210	53	57	51	80	68	86	78	E	E	E	14	11	6	F	F	O	—	—
Sat., 14	30.039	51	55	48	93	96	94	94	E	NW	NW	8	16	8	R	O	O	—	—
Means, the week.	30.096	56	65	50				74										9.00	1.43

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

"BREAKING UP TYPHOID FEVER."

Chambers, page 97, says it can be done, often by an emetic. Murchison, Jenner, and other eminent writers favor this view rather than otherwise. The evidence is that it arises from surroundings, or may so arise, and not, like variola, from a specific cause, in all cases generated from within the body or from its surface. Filth, in any quantity or form, never causes small-pox, but it certainly does "typhoid fever." Can the virus of variola be expelled from the human body by art or nature? No one holds the affirmative, however small the quantity absorbed. What clinician holds this same view as to the fever in question? None that I find. According to our present knowledge the theory, at least, is that means can be taken that will abort it in many cases. J. K. Chambers uses emetics if there is gastric disturbance. Think I have seen quinine do it. Use an emetic first, if it seems indicated. J. O. Whitney.

Pawtucket, R. I.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 13, 1882, TO OCTOBER 20, 1882.

Moore, John, major and surgeon, medical director, headquarters Department of the Columbia. Granted leave of absence for one month, with permission to apply to headquarters Military Division of the Pacific for extension of one month. S. O. 145, Department of the Columbia, October 3, 1882.

Woodward, J. J., major and surgeon. Leave of absence extended four months on account of sickness. S. O. 233, A. G. O., October 6, 1882.

Waters, W. E., surgeon. Ordered to Madison Barracks, N. Y., for duty as post surgeon. S. O. 178, Department of the East, October 5, 1882.

Loring, Leonard Y., captain and assistant surgeon. Granted leave of absence for four months. S. O. 243, A. G. O., October 18, 1882.

Byrne, Charles B., captain and assistant surgeon. Leave of absence extended ten days. S. O. 243, A. G. O., October 18, 1882.

Crampton, Louis W., captain and assistant surgeon. To be relieved from duty in Department of Dakota, and to report in person to commanding general, Department of the East, for assignment. S. O. 237, A. G. O., October 11, 1882.

Barnett, Richards, captain and assistant surgeon. Relieved from duty in Department of the Platte, and to report in person to commanding general, Department of the East, for assignment. S. O. 237, A. G. O., October 11, 1882.

Caldwell, D. G., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for an extension of three months. S. O. 105, Department of the Platte, October 3, 1882.

Appel, A. H., first lieutenant and assistant surgeon. Granted leave of absence for one month. S. O. 168, Department of Dakota, October 14, 1882.

Carter, Edward C., assistant surgeon. Now at Camp Price, to proceed to Fort Thomas, and report to the commanding officer of that post for duty. S. O. 159, Department of Arizona, October 11, 1882.

Everts, Edward, assistant surgeon. Assigned to duty at Fort Cœur d'Alene, I. T. S. O. 145, Department of the Columbia, October 3, 1882.

Taylor, A. W., assistant surgeon. Relieved from duty at Fort Supply, I. T., and assigned to duty at Fort Cummings, New Mexico. S. O. 208, Department of the Missouri, October 16, 1882.

Kane, John J., assistant surgeon. Granted leave of absence for one month, with permission to apply for extension of three months. S. O. 202, Department of Missouri, October 9, 1882.

Brechemin, Louis, assistant surgeon. Relieved from duty in Department of Dakota, and to report in person to commanding general, Department of the East, for assignment. S. O. 237, A. G. O., October 11, 1882.

Gray, W. W., first lieutenant and assistant surgeon. To be relieved from duty in Department of the Columbia, and to report in person to commanding general, Department of the South, for assignment. S. O. 237, A. G. O., October 11, 1882.

Wakeman, W. J., first lieutenant and assistant surgeon. Upon being relieved at Fort Douglas, U. T., to proceed to Fort Fred Steele, W. T., and report to the commanding officer at that post for duty in the absence of Assistant Surgeon D. G. Caldwell, on leave of absence. S. O. 106, Department of the Platte, October 6, 1882.

McCreery, George, assistant surgeon. To report in person to the Superintendent Mounted Recruiting Service, Jefferson Barracks, Mo., to conduct a detachment of recruits to the Department of Arizona. On completion of that duty to rejoin his station in that department. S. O. 233, A. G. O., October 6, 1882.

Birmingham, H. P., assistant surgeon. To proceed to Fort Bayard, New Mexico, when relieved at Fort Elliott, Texas, and report to the commanding officer for duty. S. O. 198, Department of the Missouri, October 3, 1882.

Ewen, Clarence, assistant surgeon. Relieved from duty at Fort Elliott, Texas, to proceed to Fort Gibson, I. T., and report to the commanding officer at that post for duty. S. O. 198, Department of the Missouri, October 3, 1882.

Appointment. — At a meeting of the Trustees of the Free Hospital for Women, held October 19, 1882, Dr. J. W. Elliot was elected Assistant Surgeon to the institution.

Suffolk District Medical Society. — There will be a stated meeting of the Suffolk District Medical Society on Saturday, October 28th, at 19 Boylston Place, at 7.30 p. m. Readers: Dr. H. J. Barnes, Boston's Water Supply; Dr. A. C. Garratt, Static Electricity as a Remedy. Dr. Morton Prince will exhibit some preparations showing the Bacterium of Red Sweat. Supper at nine o'clock. H. C. Haven, *Secretary*.

Gynæcological Society of Boston. — The next regular monthly meeting will be held in the Medical Library Rooms, 19 Boylston Place, on the first Thursday in November, at eleven o'clock a. m. Reader, Dr. A. L. Norris. Subject, A Series of Clinical Cases in Obstetrics.

Henry M. Field, M. D., *Secretary*.

A. L. Norris, *Secretary pro tem.*

Original Articles.

CLINICAL OBSERVATIONS ON ALBUMINURIA, BASED UPON A STUDY OF SIXTY-TWO CASES SEEN IN PRIVATE PRACTICE.[1]

BY ARTHUR V. MEIGS, M. D.,
Physician to the Pennsylvania Hospital.

During the last eight or nine years it has been my habit to keep a record of the examinations of urine I have made. That record now contains notes of between sixteen and seventeen hundred examinations, and a study of it recalls to my mind, with more or less distinctness, the histories of sixty-two persons suffering with albuminuria.[2] In a number of instances I have been able to follow cases for a series of years; from this circumstance in particular, the number of years the patients were under observation, I have been enabled to satisfy myself of some clinical facts, particularly in reference to the diagnosis and prognosis in this complaint, which I hope may be worthy of your attention.

That which has most impressed me is the impossibility of making a prognosis, with any degree of exactitude, in most cases of Bright's disease. Of course, in the plainer ones, the decision is easy; if asked an opinion in a case with a large, or even moderate amount of albumen in the urine, with increasing heart failure, and evident decline of strength and vitality, with headaches and the peculiar white complexion of the disease, it is easy to prophesy that such a person will not live long, and the prophecy, nine times in ten, comes true; if called, however, to decide questions of the future for a young man of thirty-two or three, previously well, but for some weeks complaining of headaches, malaise, and boils, and then examination of the urine shows a slight amount of albumen, granular and hyaline casts, and abundance of rather small oxalates, the question of the future is not so easily decided. I have seen such cases go on pretty well for a few months, then suddenly have convulsions, and die in a few days. Again, persons presenting identical symptoms, after being sick a few weeks or months, entirely recover. To my mind it is impossible, in the present state of our knowledge, to anticipate the future, and the patient should always have the benefit of the doubt, and be shown the brighter rather than the darker side of the picture.

I know of three persons in whose urine I found albumen and tube-casts, accompanied with all the other signs of Bright's disease more than eight years ago, who are yet alive. One is a lawyer in easy circumstances, who was taken sick in January, 1874, when he was fifty-six years of age, with what appeared to be a bad cold, but he had extreme dyspnœa and excessive restlessness and nervousness, although he is usually very self-composed. The dyspnœa seemed greater than could be accounted for by the extent of disease of the lungs, which amounted only to a moderate bronchitis; the urine being examined, it was found to contain a trace of albumen, some blood, and tube-casts. It should be said that this man had suffered in previous years with attacks of gravel, when he would pass blood and small calculi. Nearly four years afterwards there was still a trace of albumen in the urine, and granular casts, showing that the condition was by no means merely temporary. Ever since he is liable to severe cold, and always suffers more than common with oppression, although it usually takes the form of a common coryza. He is now sixty-four years old, and an unusually young-looking, active man of his years.

In contrast with this case, a woman of about sixty was seized in the night, having gone to bed apparently in her usual health, with an attack of oppression, and what her physician called congestion of the lungs, so violent that it was thought she would die at once; she, however, rallied by morning. An examination of the urine, made a few days afterwards, revealed the presence of a slight trace of albumen and casts. Four months afterwards there was still a trace of albumen in the urine, and granular and fatty casts, although she was up and about as usual, being merely very weak, having no apparently urgent renal symptoms. At a later examination the trace of albumen was still found, but no casts. About seven months from the first discovery of the disease she had another violent attack of oppression, and died in a few hours. Now what are the points to distinguish these two cases? One died after a few months' illness, and the other, having had apparently the same complaint and almost identical symptoms, is, after eight years and a half, still alive, and more, apparently, unusually well for his time of life.

In December, 1874, a lawyer in full practice, then about fifty-seven years of age, was taken with an attack of acute catarrhal pneumonia, and was also found to have albumen and tube-casts in the urine. He was sick all that winter and the following spring, the urine constantly containing albumen and granular and hyaline casts. The albumen and casts were found in the urine during 1875 and 1876, and part of 1877. On May 2, 1877, about two and a half years from the onset of the disease, there was at last no albumen found, and the microscope revealed nothing abnormal. Since that time, although the urine was examined in 1878, 1880, 1881, and 1882, there has never been found either albumen or tube-casts, and the patient, now a man sixty-five years of age, enjoys very good health, having had no return of the disease in more than five years.

The third case is a woman, whose father, brother, and two sisters have died of the same disease. She has had a trace of albumen and hyaline and granular casts in her urine since March, 1874, when she was about thirty-one years of age. I have records of this condition in 1874, 1876, 1879, 1880, 1881, and 1882. In February last she caught cold, and seemed for some time upon the verge of a severe renal attack, having coryza, so that her nose was almost entirely stopped, and there were bronchial râles heard in the chest, but an amount of dyspnœa, seemingly out of all proportion to the extent of the disease, that could be detected by physical exploration; the albumen in the urine also increased very much in quantity. In some weeks, however, she recovered, and this summer seems in her usual health.

The father of this patient had a severe attack of hepatic colic, and passed several gall-stones in 1877, but afterwards he continued in pretty fair health for some time. On May 9th, 1879, a trace of albumen was found in the urine; this continued to be present at succeeding examinations, but no tube-casts were found at this time, or afterwards, although they were carefully sought for, and about December, 1880, eighteen months from the original discovery of his disease, he succumbed to an attack of uræmic convulsions, being seventy years of age. A son and two daughters of this man died of the same disease some years before. The son, after having had dropsy, lived for several years in tolerable comfort, until a severe cold proved fatal. With the history of this son, and one of the daughters, I am not familiar, but the third one I saw, and she died in convulsions. The condition of this person before her final illness, which lasted only a few days, was in no way different from that of her sister, who is still living, and has had the disease for nearly nine years, and the attack which the surviving one had last March was exactly like those of which I have frequently seen other people die.

---

[1] Read before the Philadelphia College of Physicians, October 4, 1882.

[2] Many of these cases occurred in the practice of my father, Dr. J. Forsyth Meigs, but a large majority of them I saw from time to time myself.

I maintain, therefore, that with our present knowledge it is impossible, in doubtful cases, to prognosticate what the result will be, and that for the patient and his family, as well as for the credit of our profession, we should be very guarded in our prognosis. The presence of albumen and tube-casts in the urine, even when found for so long a time as two years continually, is not, as shown by one of the histories I have detailed, a reason why we should necessarily give a fatal prognosis, and this is particularly the case when the patient is a person past middle life. In the face of such authorities as Beale and Grainger Stewart, many practitioners think the microscopists can better judge (by examining the urine) of the stage and form of Bright's disease they have to deal with than they themselves can. Grainger Stewart is emphatic upon the subject. On page 271 of the American edition of his work on Bright's Disease, he says: "Some authors attach great importance to the tube-casts. They are of undoubted value in establishing the existence of Bright's disease, considered generically, but they afford comparatively little assistance in the differential diagnosis of the different forms. Any form of tube-cast may occur in any form of the disease and at almost any stage. Indeed, all the leading varieties may occur simultaneously in one case." Beale says:[1] "Dr. Basham thinks he can judge of the stage of Bright's disease by the character of the urinary sediment. I wish I could agree with him in this conclusion. The more carefully the matter is investigated the more convinced am I that it is unsafe in many cases to attempt to draw inferences as to the stage of the disease from the character of the urinary sediment only. Nothing but a careful consideration of every point connected with the case will enable us to arrive at a general conclusion concerning the state of the disease. . . . Dr. Basham says: 'The most untractable and hopeless form of *morbus Brightii* is that represented by the presence of the fatty or oily cast.' This statement requires some qualification, for although it is quite true that some of these cases are terribly and rapidly fatal, it must be admitted that some live for twenty years or more, and die at last of other disorders." With regard to the presence of oily casts in the urine, and it is upon their discovery that microscopists found their gravest prognosis, Dr. George Johnson says:[2] "The appearance of oily casts and cells excites less alarm now than it formerly did. It indicates that in certain parts of the kidney the secreting cells and inflammatory exudations are undergoing fatty transformation; but I have seen many cases of complete recovery after oily casts and cells in great numbers had appeared in the urine continuously for many weeks."

A very common symptom of renal disease, and one upon which there is not much stress laid in the majority of books upon the subject, is dyspnœa. Whenever a patient is found suffering with dyspnœa, and particularly if there is great nervousness and loss of self-control and anxiety, with no other fully sufficient cause for its existence, suspicion of renal disease should be aroused, and the urine examined, even if there are no other symptoms whatever pointing toward a lesion of the kidney. These attacks of dyspnœa frequently come on with great suddenness in persons who have not considered themselves sick, and such attacks are often quite rapidly fatal. This condition has been described as renal asthma, but I believe it much more common than is usually supposed. Another symptom of Bright's disease, which I have frequently noticed, and have never heard described, is coryza, of such a character that it gives rise to very much greater distress than any ordinary cold in the head; with this there is not much discharge from the nose, but the patient complains that he can get little or no air, except through the mouth, this being accompanied with excessive oppression, much more than the condition would seem to warrant. This symptom was first called to my attention by my father, Dr. J. Forsyth Meigs, in a case we saw together about nine years ago.

The suddenness of the onset, or perhaps it would be more correct to say of the discovery of the existence of this disease, is often very great. In one instance I knew of a young man, previously supposed healthy, seized with a convulsion while sitting at the supper table, after he had finished his day's labor as a wagon driver; this was followed by others, and the case ended fatally in a few days. In a second case I was called upon by a young woman to explain a swelling of the vulva, with which she was suffering; examination of the urine revealed the existence of a large amount of albumen; this continued for some time, but after prolonged use of iron her condition improved, and she had apparently fair health, until about two years later she became pregnant, and died within a few days after the birth of her child. In a third case, a man, fifty-four years of age, was seized in the night with epistaxis, a thing he had not had since he was a boy; examination of the urine revealed the cause, and about six weeks later he was found one morning insensible in the bath-tub; examination showed that he had right hemiplegia, and he died in three days; a vessel in the brain had ruptured, presumably from the same degeneration which, six weeks earlier, had caused the nose bleed. On the other hand, the insidious nature of this disease, and of its onset, is a matter of such common report that I will not weary you with any cases illustrative of this fact.

The existence of oxaluria, or of uric acid lithiasis, is a prolific source of mischief to the kidney. The deposit of oxalates or uric acid in the kidney and its passage outwards occurs most frequently in persons who are large eaters, living an inert life, and taking but little exercise. Such people are common among the rich in large cities, and I have seldom failed to find tube-casts in the urine of any one who passed gravel for any length of time, whether oxalates or uric acid, even if the calculi were microscopic in size, and this commonly before any albumen was to be found. Later, if there is any considerable amount of gravel passed, albumen and blood will be found in the urine. If the attacks of gravel occur often, they are apt at last to be followed by Bright's disease, directly caused, probably, by the mechanical irritation of the lining membrane of the tubules of the kidney by the sharp edges of the minute calculi passing through them.

---

[1] Kidney Diseases, Urinary Deposits, and Calculous Disorders.

[2] Lectures on Bright's Disease, New York, 1874.

It cannot be proved by statistics, and yet I think there is strong ground for believing that the proportion of deaths caused by affections of the kidney is greatly on the increase. The tendency of modern life seems to be such that a larger number of deaths are caused by degenerative processes, and less by acute disorders. In former times children were less delicately reared, and a larger proportion of the frailer ones probably died from exposure and want of care; now, beginning at childhood, and continuing up to old age, we are much more careful to avoid exposure, and are more self-indulgent, at least as far as our bodies are concerned. Who, in modern times, except the professional athletes, would undertake the physical labors of the Emperor Charles V. of Germany, of whom Motley says that he was able to tell, at a time when all journeys were made on horseback or by boat, "of his nine expeditions into Germany, six to Spain, seven to Italy, four to France, ten to the Netherlands, two to England, as many to Africa, and of his eleven voyages by sea!" Nowadays the majority of city men are in their places of business all day, and take but little exercise, eating as much and as rich food as in former times, and drinking not a little withal. The natural and necessary consequence follows that after years of this kind of life the excretory organs degenerate; first the kidney, which is the common sewer of the body, and, like the heart, has to do continual work from the hour of birth until the hour of death. It is a common thing, in modern life, to see a man naturally robust, and gifted with a large appetite, become more inert as years go by, when he will gradually give up his active exercise until finally he takes none; still the eating and drinking go on, and he becomes fat and sluggish; finally he loses health, and then examination shows that degeneration is beginning in the kidney. I could instance several cases of the kind, but my space will not allow me.

The drift of my paper has been to try to establish, that we should, in all ordinary cases of albuminuria, be very guarded in our prognosis, except when it is self-evident that the case must be rapidly fatal. I have now under observation fifteen persons, seventeen, if I count two who have albuminuria alternating, or parallel, with diabetes mellitus, who have been suffering with this complaint for a greater or less length of time. With three of them, the disease began nearly nine years ago, and they either have it now or have entirely recovered from it after more than two years' continual duration; yet in regard to no one of them do I feel able, even in my own mind, to guess, much less to formulate an opinion, as to how much longer they may live. There are absolutely no data, if such cases are considered in the light of the experience of the sixty-two I shall mention, upon which to found a positive prognosis.

Another observation I have made is in regard to the deaths of very old people. We are all agreed I presume, that when a very old person dies, and we report the death as one of old age, it is because we are unable to put the finger upon the exact part of the old and worn out machinery that at last refuses to work, and thereby causes all the rest of the mechanism to stop. This direct cause, if sought for, will frequently be found in the kidney. To examine the urine is not always a thing that strikes us, particularly when absolutely no symptoms appear to point toward kidney disease. I have seen a number of instances in which old people seemed to be fading out, as they often do, yet have felt entirely unable to explain to myself any direct cause for the failure, until the urine was examined, when there was found albumen, with granular and hyaline casts, and sometimes a few blood corpuscles. A careful inquiry would perhaps reveal the fact, that the amount of urine passed was very small, all this without any other symptom to point toward kidney disease; at the same time the failure of the patient being very gentle and gradual, or else, as not infrequently has happened, senile delirium existed, either violent or mild in type, followed at last by death.

In the whole sixty-two cases, which I will now summarize collectively, there have occurred twenty-six deaths, thirty-four are, to my knowledge, still living, some in better and some in worse health, and of two I have lost sight.

Five were cases of ordinary acute desquamative nephritis, with the occurrence of one death and four recoveries. In one instance, a child, there were two attacks, two years apart, the first being unaccounted for, the second following scarlet fever; the second case occurred after scarlet fever; the third after diphtheria; the fourth was in a young man apparently healthy previously, and now in good health; his attack only lasted a short time; the fifth and fatal case was in a boy of about fifteen years of age, and came on while he was at boarding-school, the onset being insidious, and the disease progressing from bad to worse, until death occurred.

Four cases seemed to be caused by the passing of gravel, principally oxalates. These people are still all living, although they have had albumen and casts present in the urine, on and off, for varying lengths of time; two of them for six years past, one for seven years, and the fourth has had two attacks of nephritic colic, about a year apart; on each occasion albumen and granular casts, uric acid, and blood corpuscles were found in the urine.

Twenty-two cases I class as of ordinary Bright's disease, there being probably contracted kidney in the majority of instances, and of them fourteen are dead. I made no post-mortem examination in any one of these cases. In most of these cases (seventeen of them) the onset was insidious, there being no illness to mark the beginning of the disease; in one, the patient was seized with a convulsion at the supper-table, having been supposed previously to be in good health; in a second, there was a violent attack of congestion of the lungs, with terrible dyspnœa during the night, the patient, a woman, having gone to bed thinking herself in good health; in a third, there was dyspnœa and congestion of the lungs occurring suddenly; in a fourth, the condition of the kidneys was discovered concurrently with an attack of catarrhal pneumonia; a fifth was a man who had had attacks of nephritic colic. He had a violent attack of congestion of the lungs, with bronchitis and dyspnœa, and was found to have albumen and casts in the urine, which condition continued, on and off, for four years; he is now in apparently good health, although the first attack was nearly nine years ago. Of these twenty-two cases, two were in one family, one soon dying, and of the other I have lost sight; two in another family, one dying and the other, I think, being still alive, although the disease was discovered three years ago; five cases occurred in another family, the father, son, and three daughters. The father and mother of this family had ten living children, five reaching adult life, one died of consumption, and the other three, and the father, of Bright's disease, the surviving daughter has had the disease for nearly nine years. In another family there were three cases, all women; one died, having had uræmic convulsions, and the other two still live, both having had the disease for about three years. A brother has now cancer of the rectum. The mother is still alive, and, although seventy-four, enjoys good health. The father died at quite an advanced age, but I do not know of what disease.

The next twenty-two cases I must classify as unaccountable; eighteen of them occurred in persons over sixty years of age, and the other four were well on in life; one was over ninety, three over eighty, and two over seventy years of age. Of these people only five are dead, and of the five fatal cases one was the man over ninety, two were over eighty, a fourth was seventy-seven, and the fifth sixty-seven.

The next four cases were of people advanced in life, and they died of general break-down, having in three instances concurrent disease of the heart and kidneys, with implication of the lungs, and the fourth had renal and brain disease.

In two instances there has been albuminuria with diabetes mellitus; in one sugar was discovered in the urine six, and in the other four, years ago. Since then there has been sometimes sugar, and at others albumen; at times both at once in the urine of these two women. In neither instance have tube-casts ever been found. I mention these two cases in a paper upon albuminuria, because both have frequently had albumen in the urine, and I confess myself unable to explain the phenomenon, the quite frequent presence of albumen in the urine, without tube-casts, or any other sign of renal disease, and yet I can hardly believe the albumen to be merely due to cystitis, for if that were so it should be constantly present.

In one instance I have followed for four years the history of a man who drinks to excess. At the beginning of, and for a time before, his attacks of delirium tremens, while he is consuming alcohol freely, he often has bloody urine, which will contain tube-casts of all the varieties at different times, fatty, hyaline, and granular. When he ceases his consumption of alcohol, as he has quite frequently done for two or three months at a time, the urine becomes normal, as far as chemical tests and microscopic examinations will reveal its condition. In the light of this case how can we believe that the abuse of alcohol does not produce renal degenerations? Is not this man sure to die of Bright's disease if he continues his indulgence in alcohol?

Another case was a man over fifty years of age, who was seized with rheumatism; he progressed badly, and was much more sick than the amount of rheumatism would seem to warrant, and at last, after about three weeks, died, having obstruction of the bowel and inflammation of the kidneys, as shown by the presence of albumen and tube-casts in the urine; also hydrothorax, and extreme stupor, which seemed uræmic. This man had had an attack of influenza about three or four weeks previous to his fatal illness. Can there be any connection between the severe influenza, and the rheumatism, and renal inflammation and obstruction of the bowel, of which this patient died?

The last case I will mention was a boy, who died very suddenly of congestion of the lungs, probably the first stage of pneumonia. A trace of albumen and granular casts were found in his urine, which was obtained a short time before death. This boy was about sixteen years of age, and did not seem much sick on the afternoon of one day, being up and dressed, the next morning dying, in a state of maniacal delirium, with his lungs extremely congested There was, unfortunately, no post-mortem examination made. This case would seem one in which the pulmonary affection was primary, and yet it might be that he had a latent contracting kidney.

There has been much said of later years about kidney disease without the presence of tube-casts in the urine, and of the presence of casts without albumen. I may say that I have frequently found tube-casts in the urine when the most careful chemical examination failed to detect any albumen, and *vice versâ*, have failed to find any casts at all, when the event proved the existence of renal disease.

The subject of treatment I have not even mentioned in my paper, although much might be said about it, because I have already trespassed too long upon your time.

In conclusion I will briefly recapitulate the points which it has been my endeavor in this paper to prove.

First, that in no ordinary, uncomplicated case of Bright's disease, should a prognosis of speedy death, or even of incurable disease, be given, for I have related cases in which the disease was chronic, lasting more than two years, and which ended in complete recovery, and others in which the person affected has lived nearly nine years.

Second, that dyspnœa, usually taking the form of renal asthma, is much more common than is usually supposed, and, when properly appreciated, is a valuable diagnostic sign of the disease; also that severe coryza is a complication or accompaniment, and has a diagnostic value.

Third, that Bright's disease, as a cause of death, is on the increase.

Fourth, that it is a very common cause of the deaths of old people, probably being the direct cause in many deaths reported as of old age.

Fifth, that the passage of gravel, even when microscopic in size, but particularly if large enough to cause nephritic colic, is a prolific cause of the disease.

Sixth, that the occurrence of tube-casts in the urine, without, or in advance of, the presence of albumen, is very common, and *vice versâ*, persons may die of Bright's disease, and the most careful examination fail to show any tube-casts, although there may be albumen constantly present in the urine.

Seventh, that the abuse of alcohol is certainly a cause of kidney disease, as proved by the case I have related, in which it has, again and again, caused hæmorrhage from the kidney, with the temporary presence of albumen and tube-casts in the urine, disappearing again with the cessation of its consumption.

ONE HUNDRED CASES OF ANTISEPTIC OVARIOTOMY.

BY JOHN HOMANS, M. D.

No.	Date.	Place of Operation.	Condition.	Age.	Length of Incision.	Adhesions.	Treatment of Pedicle.	Weight of Tumor.	Result.	Remarks.
1	Feb. 27, 1877.	Carney Hospital.	S.	16	4½ in.	Slight and vascular, to omentum.	Tied in halves with carbolized catgut.	21 lbs.	Recov. rap.	Well, strong, and working hard in 1878. Catamenia regular since August, 1877.
2	Mar. 30, 1878.	Carney Hospital.	S.	20	5 in.	Almost universal to anterior and lateral abdominal parietes.	Do.	29 lbs.	Recovery.	Went home at the end of four weeks. Catamenia regular since May, 1878. In November, well and strong. Has gained twenty pounds in weight.
3	Aug. 31, 1878.	Carney Hospital.	W.	58	4 in.	To uterus by strong and thick vascular bands.	Do.	20 lbs.	Recovery.	Went home at the end of four weeks.
4	Sept. 17, 1878.	Carney Hospital.	W.	60	4 in.	Delicate cellular adhesions to envelope, like those of an easily separable fatty tumor.	No pedicle.	24 lbs.	Recovery.	Went home on sixteenth day.
5	Sept. 29, 1878.	Carn spital.	M.	24	4½ in.	Slight peritoneal. Extensive omental.	Tied as in other cases.	14 lbs.	Recovery.	Went home on twenty-first day Peritonitis and purulent inflammation of the cyst walls at time of operation.
6	Nov. 8, 1878.	Boston.	S.	48	4 in.	Strong and intimate to peritonæum, pelvis, to mesentery, and intestine.	Do.	42½ lbs.	Death.	From shock in fourteen hours.
7	Dec. 28, 1878.	Northfield, Vt.	M.	47	5 in.	To intestine and omentum.	Tied with catgut, without transfixion. Several circular ligatures applied.	Not determined.	Recovery.	A burst papillomatous cyst; peritonitis, with patches of lymph on the peritonæum, and considerable ascites were present. Patient had been vomiting, and had hectic fever for two weeks. A piece of cyst wall, adherent to intestine, was cut with scissors, and left otherwise undisturbed.
8	Feb. 13, 1879.	Reading, Mass.	M.	38	Umbil. to pub.	To rectum and pelvis.	Tied with catgut and silk and dropped back.	3 lbs. 30 lbs. ascitic fluid.	Recovery.	Died eight months later of cancer.
9	March 6, 1879.	Carney Hospital.	M.	26	3½ in.	Omental.	Do.	30 lbs.	Recovery.	
10	May 11, 1879.	Carney Hospital.	M.	50	Umbil. to pub.	Universal.	Do.	Not weigh'd.	Death.	From shock in three hours.
11	June 26, 1879.	Carney Hospital.	S.	28	3½ in.	Slight parietal.	Tied with many ligatures.	12 lbs.	Recovery.	
12	July 16, 1879.	Carney Hospital.	S.	41	Umbil. to pub.	To abdominal parietes, liver, omentum, and mesentery.	Tied with catgut.	18 lbs.	Death.	Shock.
13	Oct. 1, 1879.	Carney Hospital.	M.	41	5 in.	None.	Do.	21 lbs.	Death.	Hæmorrhage from slipping of catgut ligature ten hours after operation.
14	Nov. 26, 1879.	Carney Hospital.	S.	24	6 in.	Slight.	Tied with carbolized silk and dropped back.	12 lbs.	Recovery.	Both ovaries removed. Menstruation regular, but more painful than before ovariotomy. One cyst dermoid.
15	Dec. 21, 1878.	Carney Hospital.	S.	33	4 in.	Omental and intes.	Do.	25 lbs.	Recovery.	
16	Feb. 8, 1880.	Boston.	M.	39	4 in.	None.	Do.	25 lbs.	Recovery.	
17	Mar. 7, 1880.	Carney Hospital.	M.	28	3 in.	None.	Do.	27 lbs.	Recovery.	Cyst of left broad ligament.
18	Mar. 23, 1880.	Taunton.	M.	37	3½ in.	Slight.	Do.	20 lbs.	Recovery.	
19	April 1, 1880.	Carney Hospital.	S.	18	5 in.	Universal and intimate to anterior parieties, and slight to omentum.	Tied as above, and burnt off with Paquelin's cautery.	45 lbs.	Recovery.	Adhesions burnt off with Paquelin's cautery.
20	April 17, 1880.	Fall River.	M.	48	3 in.	None.	Do.	8¾ lbs.	Recovery.	
21	April 29, 1880.	Carney Hospital.	S.	58	2½ in.	None.	Do.	14 lbs.	Recovery.	
22	May 18, 1880.	Mt. Holly, Vt.	M.	38	3½ in.	None.	Do.	50 lbs.	Recovery.	
23	July 10, 1880.	Boston.	M.	57	4 in.	None.	Do.	48 lbs.	Recovery.	
24	July 15, 1880.	Carney Hospital.	S.	47	4 in.	None.	Do.	18 lbs.	Recovery.	Cyst of left broad ligament.
25	July 31, 1880.	Carney Hospital.	M.	47	6 in.	Intimate, and recent to omentum and intestines.	Do.	11 lbs.	Recovery.	The omentum turned up and laid on a carbolized towel, and the intestines turned downwards towards the pubes during the removal of the cyst.
26	Aug. 1, 1880.	Carney Hospital.	M.	30	3½ in.	None.	Do.	25 lbs.	Recovery.	Dermoid cyst.
27	Aug. 21, 1880.	Carney Hospital.	M.	29	6 in.	Almost universal and recent to parietal peritonæum.	Do.	23 lbs.	Recovery.	Papilloma.
28	Aug. 22, 1880.	Carney Hospital.	M.	29	6 in.	Slight.	Do.	51 lbs.	Recovery.	Forty ounces of serum removed by aspiration from the left thoracic cavity on the fourth day after ovariotomy.
29	Sept. 1, 1880.	Woburn, Mass.	M.	46	8 in.	To peritonæum, small intestine, and diaphragm; firm and old.	Do.	39 lbs.	Death.	Exhaustion on 5th day. Very hot weather.

No.	Date.	Place of Operation.	Condition.	Age.	Length of Incision.	Adhesions.	Treatment of Pedicle.	Weight of Tumor.	Result.	Remarks.
30	Sept. 2, 1880.	Auburndale.	M.	47	7 in.	None.	Tied as above, and burnt off with Paquelin's cautery.	40 lbs.	Recovery.	Fluid gelatinous.
31	Sept. 7, 1880.	Carney Hospital.	M.	27	6 in.	Intimate and old, or congenital, to small intestine, mesentery, and uterus; in fact, incorporated with them.	Do.	20 lbs.	Death.	Shock. Papilloma.
32	Sept. 23, 1880.	Carney Hospital.	M.	33	4 in.	Recent to anterior peritonæum.	Do.	16 lbs.	Recovery.	Sixty-five pounds of ascitic and ovarian fluid removed by tapping within the last three weeks before operation.
33	Oct. 2, 1880.	Carney Hospital.	S.	48	5 in.	Universal, old and new, to peritonæum.	Do.	38 lbs.		
34	Oct. 6, 1880.	Carney Hospital.	W.	38	3½ in.	Solid, old, to uterus, oment. and pelv.	Do.	15½ lbs.	Recovery.	Cyst more or less enucleated.
35	Oct. 23, 1880.	Carney Hospital.	M.	45	2½ in.	None.	Do.	10¾ lbs.	Recovery.	
36	Nov. 6, 1880.	Carney Hospital.	W.	31	2½ in	None.	Do.	21¾ lbs.	Recovery.	
37	Nov. 18, 1880.	Carney Hospital.	S.	31	6 in.	To intestine and uterus.	Do.	18 lbs.	Recovery.	The portion of the cyst adherent to bowels was cut out and left behind.
38	Nov. 28, 1880.	Carney Hospital.	W.	52	8 in.	Do.	Do.	30 lbs.	Recovery.	
39	Dec. 1, 1880.	Carney Hospital.	M.	37	6 in.	None.	Tied and burnt off with Paquelin's cautery.	27 lbs.	Death.	Diseased kidneys.
40	Dec. 18, 1880.	Carney Hospital.	S.	54	6 in.	Parietal.	Do.	110 lbs.	Death.	Facial erysipelas on the fourteenth day.
41	Dec. 21, 1880.	Carney Hospital.	S.	38	8 in.	Slight.	Do.	25 lbs.	Recovery.	
42	Jan. 6, 1881.	Carney Hospital.	S.	26	5 in.	None.	Tied and burnt off with Paquelin's thermo-cautery.	14 lbs.	Recovery.	
43	Jan. 26, 1881.	Carney Hospital.	S.	38	5 in.	None.	Do.	15½ lbs.	Recovery.	
44	Jan. 27, 1881.	Carney Hospital.	W.	63	5 in.	To both Fallopian tubes and to sigmoid flexure.	Do.	9¼ lbs.	Recovery.	Dermoid cyst. Considerable ascites.
45	April 5, 1881.	Carney Hospital.	S.	40	6 in.	None.	Do.	5 lbs.	Recovery.	Dermoid cyst, and attached to this a spindle-celled sarcomatous tumor. A uterine fibroid, two pounds' weight, also removed.
46	April 14, 1881.	Carney Hospital.	M.	40	4½ in.	None.	Do.	36 lbs.	Recovery.	
47	April 16, 1881.	Carney Hospital.	M.	42	8 in.	Parietal, intestinal, and omental.	Do.	–	Death.	Died of exhaustion on the third day. Very severe operation. Tumor very vascular and nearly solid.
48	April 17, 1881.	Carney Hospital.	M.	29	4½ in.	Strong and old; anteriorly.	Do.	42½ lbs.	Recovery.	Both ovaries removed.
49	May 5, 1881.	Carney Hospital.	M.	34	4 in.	None.	Do.	26 lbs.	Recovery.	
50	May 22, 1881.	Free Hospital for Women.	M.	39	5 in.	None.	Do.	12 lbs.	Recovery.	Much ascitic fluid.
51	May 26, 1881.	Carney Hospital.	M.	42	7 in.	Very vascular; anteriorly and to omentum.	Do.	15 lbs.	Recovery.	Considerable hæmorrhage during operation.
52	June 8, 1881.	Carney Hospital.	M.	40	4½ in.	None.	Do.	10 lbs.	Recovery.	Cyst dark blue, very vascular. In appearance resembling the fœtal side of a placenta.
53	June 9, 1881.	Boston.	M.	42	4 in.	None.	Do.	18 lbs.	Recovery.	
54	June 11, 1881.	Carney Hospital.	M.	51	4 in.	None.	Do.	34¾ lbs.	Recovery.	
55	June 21, 1881.	Boston.	S.	18	4 in.	Anteriorly and to omentum.	Do.	25 lbs.	Recovery.	
56	June 30, 1881.	Carney Hospital.	W.	55	6 in.	None.	Do.	18 lbs.	Recovery.	Tumor cancerous.
57	July 7, 1881.	Carney Hospital.	S.	30	5 in.	None.	Do.	8 lbs.	Recovery.	Pedicle slipped from clamp before it was burnt off, and in order to pick it up and secure it the incision had to be enlarged Cyst of broad ligament
58	July 11, 1881.	Carney Hospital.	M.	23	4 in.	None.	Do.	11¼ lbs.	Recovery.	
59	July 25, 1881.	Carney Hospital.	S.	14	8 in.	None.	Do.	11¾ lbs.	Recovery.	
60	July 27, 1881.	Boston.	S.	49	8 in.	None.	Do.	12 lbs.	Recovery.	Both ovaries removed.
61	Sept. 1, 1881.	Carney Hospital.	S.	24	8 in.	None.	Do.	2½ lbs.	Recovery.	Cyst of the left broad ligament.
62	Sept. 8, 1881.	Carney Hospital.	S.	25	7 in.	None.	Do.	18 lbs.	Death.	Cause of death, acute mania on eighth day. A careful autopsy, by Dr. W. W. Gannett, showed everything healthy and going on well in the peritoneal cavity. Hereditary insanity in the family. Dermoid cyst.
63	Sept. 11, 1881.	Carney Hospital.	M.	41	5 in.	Anteriorly to parietes and to uterus.	Do.	33 lbs.	Recovery	
64	Sept. 18, 1881.	Carney Hospital.	W.	51	3½ in.	Anteriorly to parietes.	Do.	39 lbs.	Recovery.	
65	Sept. 27, 1881.	Taunton, Mass.	M.	60	5 in.	None.	Do.	10 lbs.	Recovery.	Some ascites.
66	Oct. 4, 1881.	Boston.	M.	45	7 in.	Universal anteriorly and laterally.	Do.	80–90 lbs.	Recovery.	Considerable ascites, which is counted in the weight.
67	Oct. 5, 1881.	Boston.	W.	45	6 in.	None.	Do.	22 lbs.	Recovery.	Both walls of bladder incised. No ill effects.
68	Oct. 24, 1881.	Merrimac, Mass.	S.	57	6 in.	Intestinal.	Do.	5½ lbs.	Recovery.	A portion of sac adherent to bowels left behind.
69	Oct. 29, 1881.	Boston.	M.	48	4 in.	Slight lateral and interior.	Do.	49 lbs.	Recovery.	

No.	Date.	Place of Operation.	Condition.	Age.	Length of Incision.	Adhesions.	Treatment of Pedicle.	Weight of Tumor.	Result.	Remarks.
70	Nov. 15, 1881.	Boston.	W.	47	3½ in.	None.	Tied and burnt off with Paquelin's thermo-cautery.	25½ lbs.	Recovery.	
71	Nov. 19, 1881.	Concord, N. H.	W.	73	6 in.	To peritonæum, omentum, and intestine.	Do.	20 lbs.	Recovery.	The age of the patient did not prevent a very rapid recovery, 99.4° F. being the highest temperature.
72	Dec. 1, 1881.	Provincetown, Mass.	M.	52	6 in.	Burst cyst.	Do.	85 lbs.	Recovery.	Abdomen filled with gelatinous material, — colloid, — which had originally come from a burst dermoid cyst.
73	Dec. 18, 1881.	Free Hospital for Women.	S.	30	7 in.	To intestine and pelvic peritonæum.	Do.	10 lbs.	Death.	Both ovaries removed. The outer surfaces of the tumors of a brown color, and beginning to decay.
74	Jan. 30, 1882.	15 Louisburg Sq., Boston.	M.	27	umbil. to pub.	Omental.	Tied and burnt off with Paquelin's cautery.	13 lbs.	Recovery.	Dermoid cyst.
75	Mar. 14, 1882.	Boston.	S.	48	8 in.	Omental and peritoneal.	Do.	25 lbs.	Recovery.	Died two months later of a recurrent tumor.
76	Mar. 19, 1882.	15 Louisburg Sq.	M.	50	5 in.	None.	Do.	15 lbs.	Recovery.	
77	Mar. 20, 1882.	15 Louisburg Sq.	W.	45	-	Parietal and rectal.	Do.	45 lbs.	Recovery.	Sixty pounds of cystic fluid removed by tapping a few days before operation in order that the patient could be moved to the city.
78	Mar. 25, 1882.	15 Louisburg Sq.	M.	45	6 in.	None.	Do.	18 lbs.	Recovery.	
79	- -	15 Louisburg Sq.	M.	25	4 in.	To uterus.	Do.	13 lbs.	Recovery.	Dermoid cyst.
80	April 4, 1882.	Lancaster, Mass.	S.	32	3 in.	None.	Do.	82 lbs.	Recovery	
81	April 10, 1882.	Boston.	S.	15	3 in.	None.	Do.	9½ lbs.	Recovery.	Dermoid cyst.
82	April 12, 1882.	Carney Hospital.	M.	32	6 in.	Omental and parietal.	Do.	10½ lbs.	Recovery.	Whether the tumor was ovarian or uterine was not ascertained till after the abdomen was opened.
83	April 19, 1882.	15 Louisburg Sq.	S	23	3½ in.	None.	Do.	24½ lbs.	Recovery.	Cyst of the right broad ligament.
84	April 20, 1882.	15 Louisburg Sq.	S.	28	3½ in.	Anteriorly to peritonæum.	Do.	24 lbs.	Recovery.	
85	April 22, 1882.	15 Louisburg Sq.	M.	59	From above umbil. to pub.	None.	Do.	28½ lbs.	Recovery.	Tumor a semi-solid myxoma.
86	April 22, 1882.	Jamaica Plain.	M.	39	Do.	Parietal.	Do.	14 lbs.	Death.	Of heart disease on fifth day. Tumor semi-solid sarcoma.
87	April 23, 1882.	Carney Hospital.	M.	48	4 in.	None.	Do.	22 lbs.	Recovery.	
88	April 29, 1882.	15 Louisburg Sq	M.	60	From above umbil. to pub.	To ascending colon and to parietes.	Do	11 lbs.	Recovery.	Adhesions between colon and cyst separated with difficulty.
89	May 5, 1882.	East Boston.	M.	47	3½ in.	None.	Do.	39 lbs.	Recovery.	Cyst of the left broad ligament.
90	May 13, 1882.	15 Louisburg Sq.	M.	41	6 in.	Omental, intestinal, and pelvic.	Do.	12 lbs.	Death.	Seventy pounds ascitic fluid. Drainage tube put in. Died on the tenth day.
91	June 5, 1882.	15 Louisburg Sq.	M.	64	4½ in	Pelvic.	Do.	7 lbs.	Recovery.	
92	June 12, 1882.	15 Louisburg Sq.	S.	24	4½ in.	None.	Do.	24 lbs.	Recovery.	
93	June 14, 1882.	15 Louisburg Sq.	M.	51	4 in.	None.	Do.	26 lbs.	Recovery.	
94	June 15, 1882.	15 Louisburg Sq.	S.	14	3½ in.	None.	Do.	6½ lbs.	Recovery.	Dermoid cyst.
95	June 19, 1882.	15 Louisburg Sq.	S.	42	3½ in.	None.	Do.	25 lbs.	Recovery	
96	June 22, 1882.	Carney Hospital.	S.	22	6 in.	None.	Do.	5 lbs.	Recovery.	Dermoid cyst.
97	June 27, 1882.	Annisquam, Ms.	M.	37	5 in.	Parietal and omental.	Do.	5 lbs.	Recovery.	Twenty pounds of pus in cyst. Temperature 101° F. before operation.
98	July 8, 1882	15 Louisburg Sq.	M.	22	3½ in.	Omental.	Do.	16 lbs.	Recovery.	
99	July 10, 1882.	15 Louisburg Sq	M.	29	6 in.	Universal	Do.	30 lbs.	Recovery.	Two arteries near aorta in left lumbar region were with difficulty tied.
100[1]	Aug. 16, 1882.	15 Louisburg Sq.	S.	24	3½ in.	None.	Do.	25 lbs.	Recovery.	Cyst of the left broad ligament.

CEREBRAL ANÆMIA AND EXHAUSTION.[2]

BY S. G. WEBBER, M. D.

AMONG the conditions of the brain most difficult for diagnosis are those in which there is irregular blood supply. Irregular supply of blood necessitates irregular or deficient nutrition. A badly nourished brain is irritable. Jaccoud states this well: "Under the influence of anæmia and of insufficient nutrition the excitability of the nervous elements is diminished, that is to say, its effects are less energetic, and exhaustion is more rapid; but by reason of the diminished vitality of the cells this excitability is aroused by very slight causes, which in health produce no reaction. The abnormal condition is, then, double: on one hand the reaction is weak and of short duration; on the other it is produced by impressions which ought to have no effect. This double condition can be well expressed by the term irritable or excitable weakness."

This condition is found in all cases of illy nourished brains, whether the defect is due to a blood supply deficient in quantity or in quality, or whether it may arise from an excessive supply of blood interfering with the nutrition; the same condition may also arise from exhaustion due to overwork of the nerve cells, the supply of blood being nearly normal, normal I mean in comparison with the work required of the brain. As all these conditions lead alike to defective nutrition of the brain, it is to be expected that many of the symptoms to which they give rise will be the same in one as in another condition. Thus the headache, vertigo, nausea, found in congestion is also found in anæmia; the excitement, delirium, hallucinations, etc., found in hyperæmia are also seen in anæmia. Also these same symptoms may be the expression of exhaustion or of poisoning of the blood.

---

[1] Total 100 ovariotomies; 87 recoveries; 13 deaths. This is about as well as I can do, unless I refuse the desperate cases. J. H.

[2] Read before the Boston Society for Medical Observation, March 6, 1882.

I do not expect to consider all the conditions to which I have alluded above, but desire to call attention to a few cases in which the symptoms have arisen from a combination of depressing agencies, and where, apparently, the result is due to anæmia and malnutrition from deprivation and exhaustion. Much has been written about hyperæmia, and great stress has been laid upon too much blood flowing to the brain. Perhaps there are patients in whom this condition exists, and yet in by far the majority of patients I believe the explanation of the symptoms is to be found in malnutrition from insufficient supply of food, or from inability to assimilate the food taken, or from exhaustion due to over-use, with too short periods of rest, or from the inferior quality of the blood.

In such cases as I propose to relate I have been in the habit of referring the symptoms to anæmia, though they are probably not caused by simple anæmia; sometimes there is probably anæmia as the ordinary condition; the irritable brain may temporarily receive a relatively increased supply of blood, though its nutritive quality or its amount may be below that appropriate for health; owing to the abnormal irritability of the brain this excess over the usual supply is sufficient to cause excitement. This would be only a temporary and perhaps local increase of blood supply in an anæmic brain, and should not influence either the diagnosis or treatment.

From what has just been said it is easy to explain the periods of excitement succeeding and followed by seasons of great depression. There is not time to give examples of all classes of cases which might be included among those of anæmia and exhaustion.

The following illustrate some of the effects of insufficient feeding and privation.

Case I. The first was Hannah M., about thirty-five years old. She was found on examination to have phthisis far advanced; she had suffered from insufficient food, had been confined two weeks previous, and had lost considerable blood. She had been somewhat delirious, and the night before she was seen had tried to beat her husband with a chair. She had headache, and felt cold. Little or nothing could be learned from the patient, as she seemed decidedly stupid and uncommunicative. She had had several loose, greenish stools daily. The pulse and temperature were both high, as might be expected from the advanced phthisis from which she suffered. She was fed frequently, the direction being given that she should have all the milk she would take, and in a short time she was given solid food. A bad diarrhœa somewhat retarded recovery, but she finally recovered from the maniacal excitement.

Case II. The next case, A. E. M., was a married woman, about thirty-five years old, who had had charge of an extensive business. Once she had been in the habit of using morphia, but had given it up. Shortly before entrance to City Hospital she had been greatly overtaxed by business and other cares, had made long days, eating sparingly, taking much less food than she needed, and had used strong liquors to keep her up; sometimes she took as much as a pint of brandy a day. For three or four weeks she had been noticed to act queerly at times, and for a week before entrance was under the care of a homœopath, who, it was said, allowed her only water Indian gruel for nourishment. On entrance she had delusions, heard and saw imaginary persons, was in communication with spirits and mediums, listened to the statements of a dying girl, then fell back on the pillow speechless and motionless when the girl died. She had not slept for some nights. Bromide of potassium and chloral, thirty grains of each, were given, and she had a good night's rest, though the dose was repeated at midnight. She objected to food, as the "medium" had told her to take nothing but the water gruel, but on the next day after admission the house officer persuaded her that the medium was mistaken, and she ate a hearty meal, saying that she had been hungry for a week. Under feeding and quinine she rapidly lost her delusions and hallucinations, and in a week could talk sensibly about them, slept all night without a hypnotic. She was very weak, and regained strength only slowly.

In this case, if the statement in regard to the strict dieting previous to admission can be depended upon, it is quite likely that hyperæmia was suspected, and she was treated accordingly, with very unfortunate result in causing a decided aggravation of the symptoms. The symptoms were entirely unlike those of delirium tremens.

Case III. Mary R., aged twenty-nine, was deserted by her husband, and had very little to eat for some months, going sometimes two days without eating. She was in the fifth month of pregnancy. One week before entrance she felt sick, and began to act queerly. She had some convulsions before entrance, and about fifteen minutes after entrance had one; the spasm was most in the upper part of the body, and bilateral; legs were only slightly affected; head and eyes were drawn strongly to the right; arms were drawn across the body, and fore-arm flexed; once the mouth was drawn to the left; respiration was quiet and natural; pulse normal; temperature 98.5° F.; no albumen in urine. Her face was slapped sharply, and the convulsions ceased; she was taciturn.

Two grains of valerianate of zinc three times a day, and a plentiful supply of food were ordered. In a few days she was entirely natural in her appearance, but a headache persisted for a few days. She was discharged well in about a month.

These three cases are sufficient for illustration. The first patient had been in an unfavorable condition for a considerable time. The loss of blood at confinement seems to have been sufficient, with the other depressing influences, to give rise to such cerebral disturbance as would not have arisen in a patient otherwise healthy. It was virtually a case of acute anæmia of which hæmorrhage was the last ætiological condition. This was the only case in which there was a rise of pulse and temperature above the normal. The phthisis was the cause of this rise. In the other cases the pulse and temperature were either normal or just below normal.

The second case was not one of delirium tremens, though indulgence in spirit may have been one element in the production of the disease. There was no tremor, no vision of repulsive objects, no terror; the case was considered outside as one of mania, and it was thought that it would be necessary to send her to an asylum. Yet here there was deprivation, voluntary, not enforced; she taking only a little tea and toast irregularly for meals, and keeping herself up by stimulants. Stimulation was probably one element in the ætiology, but not to such an extent as to justify calling the patient's condition alcoholismus.

The third case was one in which similar causes acted, but there were convulsions of an hysterical character. The patient recovered under the same course of treatment. As the patient's condition of life and circumstances were those of great privation, and while pregnant and needing a generous supply of food she had insufficient, it is reasonable to include it under the same head with the others. Call it hysteria if it seems best; then it is hysteria due to cerebral anæmia.

This third case illustrates well the necessity of inquiring into the patient's previous history before forming a diagnosis.

All these patients had been suffering from depressing influences, and finally, for a comparatively short time, from an increase of these, either a hæmorrhage or an enforced abstinence from food; they were suffering from a comparatively acute anæmia resembling that seen after severe hæmorrhages or starvation in persons previously entirely well.

Another class of patients are met who are for a longer period exposed to depressing influences; who are overworked, underfed, who finally exhibit nervous symptoms of a most varied type. Many of these patients have such a combination of symptoms referable to the head and brain that they are seriously concerned for their mental integrity, fear apoplexy, etc. Once in a while the patients with such symptoms seem to have hyperæmia of the brain, but much the larger number whom I have seen are simply suffering from insufficient nutrition of brain, owing either to general anæmia combined with overwork, or to overuse of the brain, and consequently such exhaustion that the brain has been unable to recover its normal vigor. In these the morbid condition arises from a more slowly acting cause, and, as might be expected, the symptoms differ from those found in such cases as the above. There is less excitement, more evidence of depression and exhaustion. The following summary of such a case may serve by way of illustration: —

A clergyman had been overworked with the care of a large church and congregation, holding extra meetings; during this feeling of depression no anxiety nor despondency were noticed. Notwithstanding a vacation and partial rest he had several attacks of headache, could n't study well, was dissatisfied with his work, and obliged to give it up. His brain was easily fatigued, and refused to work. There was no flushing of face, no vertigo, no symptoms excepting those briefly sketched. There was here chronic exhaustion.

— At the public exercises in connection with the bi-centennial anniversary of the old Manor Hall at Yonkers, part of which was erected in 1682, the mayor, Dr. Samuel Swift, who was a partner of the late Dr. J. Foster Jenkins, presided, and made the opening address.

REPORT ON PROGRESS IN THERAPEUTICS.[1]

BY FRANCIS H. WILLIAMS, M. D.

THE ACTION OF SALINE CATHARTICS.[2]

THE most complete and exhaustive work which has thus far been attempted on this subject is undoubtedly that of Dr. Hay. The whole of his paper is not as yet published, but there is sufficient to indicate the excellent way in which the work has been done, and to warrant a brief outline of the portion which has been printed.

After indicating at some length what has been done by previous investigators the author divides his experiments into the following series: —

"Series A. The effect on purgation of the administration of the salt (sulphate of soda) by the mouth in a state of concentration and of dilution; and the elimination of the salt by the kidneys and the alimentary canal.

"Series B. The effect of the salt on the intestine when injected directly into the viscus, after the method of Colin and Moreau, with analyses of the fluid as to the salt it contained, and to its digestive and other properties.

"Series C. The effect of the saline purgative on concentration of the blood.

"Series D. The effect of the salt on the alimentary canal and its absorption from the canal, as ascertained by killing the animals at stated intervals after the administration of the salt by the mouth, and measuring the fluid in the canal, and estimating the quantity of salt present.

"Series E. Its purgative effect when injected into the blood.

"Series F. Its purgative effect when injected subcutaneously.

"Series G. Its effect on the secretion of the urine."

Under Series A is an account of the various experiments done on rabbits, cats, and dogs. It is shown that in an animal fed without water a given dose of sulphate of soda in a concentrated, twenty per cent. solution, will not cause purgation when the same dose in two and one half per cent. solution will do so, and the more dilute the solution the more quickly is the action produced. Experiments done on rabbits, cats, and dogs show that if given in a concentrated form, and if for a single day only previous to the administration of the salt little or no water is taken with the food, sulphate of soda will not produce catharsis. "This seems to warrant the deduction that sulphate of soda acts neither by peristalsis nor by increasing the intestinal secretions, but merely by uniting with the water in which it is dissolved, and with the fluids which it meets in the alimentary canal, preventing the absorption and preserving the fluidity of the intestinal contents until the ordinary peristaltic movements have carried them to the rectum."

It may be urged that by a restriction of water in diet the water in the blood is diminished, and the blood being concentrated the usual amount of intestinal secretions are not poured out.

Vulpian has asserted that a purgative salt acts chiefly by exciting an inflammatory irritation of the alimentary mucous membrane, and consequently creates an exudation such as we observe in mucous catarrh.

---

[1] Concluded from page 392.

[2] Journal of Anatomy and Physiology, vol. xvi.

Experiment shows that croton oil does purge when the conditions are such that sulphate of soda does not. The conclusion is that sulphate of soda does not act in a manner similar to croton oil, which is probably by irritating the mucous membrane with which it comes in contact. We now get an insight into the careful and thorough methods of this experimenter; arrived at a stage of his work where many would have considered their task ended, he announces the theory which he seems nearly to have established only to admit that further experiments have led to its abandonment.

In the experiments the fæces and urine were carefully collected, and the amount of sulphate of soda present was determined by chemical analysis. Nearly all, though never the full amount of, the salt given was recovered from the urine and fæces. When the salt was administered well diluted, from one half to one third of the salt excreted appeared in the urine, and the more pronounced the purgation, the less the quantity of the salt in the urine. When the salt was given in a concentrated form nearly the whole of it passed into the urine. As regards the analyses of the fæces the most remarkable feature was the considerable increase in their inorganic constituents apart from the purgative salt present.

"Series B. The experiments included in this series are largely of physiological interest only.

"Series C. The effect of the saline purgative on the concentration of the blood."

The concentration of the blood was ascertained by counting the number of corpuscles in a given quantity of it by the method of Hayem. When the number of corpuscles in a certain quantity of blood was greater than normal it was inferred that the fluid of the blood had been diminished.

To a man, the normal number of whose corpuscles had been determined, 21.3 grammes (three fourths of an ounce) of sulphate of soda *in a twenty per cent. solution* were administered. The number of corpuscles in a given quantity of the blood was very much greater during the two hours following the administration of the purgative, the normal number was found to be present after about four hours, and after nine to ten hours there was a second concentration of the blood as shown by increase in the number of corpuscles in a given quantity of blood. Evacuation of the bowels occurred fourteen hours after administration, and a second fluid dejection three hours after this.

In a second experiment on the same individual 21.3 grammes of sulphate of soda were given in a *five per cent. solution.* This dilution caused no immediate concentration of the blood, but there followed the second or remote concentration exactly as in the first experiment. About two hours after administration purging occurred. The second thickening of the blood may be explained by the diuresis which is set up by the absorbed salt in the process of its elimination by the kidneys. A larger quantity of urine is evacuated during this period.

If an animal is allowed no water for two days the fluid portions of the blood are diminished, and a dose of sulphate of soda causes no further concentration nor any purgative action. This explains how in the first series of experiments a strong solution of sulphate of soda did not purge an animal which had received no water for two days previously. By the restriction of water in the diet the alimentary canal is emptied of its fluids and those of the blood are greatly lessened. The uathor believes that the concentration of the blood plays a more important part in preventing purging than the absence of fluid in the alimentary canal. It is thought that when the blood becomes concentrated it no longer yields secretion to the stimulus of a saline purgative applied to the mucous membrane of the alimentary canal.

"Series D. The effect of the salt on the alimentary canal, and the absorption of the salt from the canal, as ascertained by killing the animals at stated intervals after its administration by the mouth, and measuring the fluid in the canal, and estimating the quantity of salt present."

It had been observed that in cats which had taken neither food nor drink for twenty-four hours the amount of fluid in the small intestine was practically *nil.* It was under these conditions that the experiments of this series were done. Five grammes of sulphate of soda in a *five per cent. solution* were given to a cat. The animal was killed after one hour, and the contents of the intestine were examined. The amount of liquid had neither increased nor diminished during the hour it was in the alimentary canal, yet half of the salt had disappeared, proving that absorption must have been active, but equaled by secretion. The quantity of inorganic salts apart from the purgative was greatly increased.

To a smaller animal four grammes in a *ten per cent. solution* were given and the animal killed one hour afterwards. The quantity of solution in the intestine had nearly doubled, and more than one third of the salt had been absorbed.

In a third animal five grammes of sulphate of soda were given in a *twenty per cent. solution* and the contents of the intestine examined at the end of an hour. The quantity of solution had much more than trebled itself.

The absorption of the salt was nearly equal in all the experiments.

The increase in the amount of fluid with the concentrated solutions was due to the fact that secretion takes place as with dilute solutions, but the stronger solutions prevent absorption, and thus the quantity of fluid is greater in the case of the stronger solutions.

By other experiments, an outline of which want of space forbids, it is shown that the salt remaining within the intestine withdraws fluid from the blood through exciting secretion in the intestinal glands and in this way purges.

The great rapidity with which the salt solution increases in volume in some of the experiments is remarkable, and precludes the supposition that it is due to the osmotic power of the salt.

"Series E. On the effect of the salt when injected into the blood."

In conjunction with previous observers he finds that sulphate of soda is incapable of inducing its usual purgative effect when injected into the circulation. On the contrary, a degree of constipation appears usually to follow.

In this sketch justice has hardly been done the original.

ABSORPTION OF MERCURY. ITS USE IN SYPHILIS WITH OTHER REMEDIES.[1]

It has been found by experiments on animals that when mercurial ointments are rubbed on the skin the globules of mercury are pressed into the sebaceous and hair follicles. The sebaceous matter there converts the metal into a soluble mercurous compound which is then absorbed. Mercury cannot pass in its metallic form or in vapor directly into the skin or mucous membrane.

---

[1] Dr. Furbringer, Practitioner, January, 1882.

In an article by Dr. Fox on the Use of Mercury and other Remedies in Syphilis,[1] much is mentioned that is of value to the general practitioner. Mercury is considered to be our most valuable remedy; at the same time it is believed to be much overrated. Great stress is put on the value of hygienic and tonic measures, and mercury is not thought essential to the cure of syphilis, as the author has treated several patients for two or more years without mercury, and they seemed to do as well as other patients treated in the usual manner.

As regards the administration of this drug the internal method is preferred; local irritant effects should be avoided, which may be accomplished by reducing the size of the dose, and, if necessary, giving it oftener. He has found the green iodide one of the best preparations, and has never observed any benefit result from a combination of various salts or by a frequent change from one preparation to another, and believes the amount of mercury given to a syphilitic patient is unnecessarily large. The duration of the mercurial treatment should vary according to the severity of the case, and no absolute rule can be laid down that every case requires so many months or years of treatment. The best practice is to give mercury during the existence of any symptom of the disease, and continue it six months after the last symptom has yielded; if symptoms reappear mercury should be used again and continued for two or three months after their disappearance.

Iodide of potassium is believed to have a curative effect on syphilis, and there is no stage of the disease when both remedies are not calculated to do good. Iodide of potassium is a remedy which should not be continued for any length of time, as it may do harm, especially in large doses.

Iron is of great value in the treatment of syphilis, and should be ranked with mercury and iodide of potassium, since its power to combat anæmia, which is invariably present in the early stage of syphilis, renders it a most valuable adjunct to mercury. The tincture of the chloride is the best preparation, since it counteracts the slight diarrhœa which often results from very small doses of mercury.

Cod-liver oil is not unfrequently of service in the treatment of syphilis in connection with mercury or iodine in individuals with a decidedly strumous diathesis. In addition to the above there are many hygienic measures which are of value in the treatment of this disease.

ON THE USE OF BELLADONNA IN CERTAIN CASES OF HERNIA.[2]

In the case of a patient who had ruptured himself one week previously, and on whom, after consultation, it was decided to operate, except that his consent could not be had, tincture of belladonna in half-drachm doses every hour was given. After six doses the pupils were largely dilated and the rupture passed up easily. Two weeks later, his truss not being properly adjusted, the rupture came down. Reduction again failed, but three half-drachm doses of tincture of belladonna overcame the difficulty.

In a second case, a youth of nineteen, whose hernia was not reduced after a hot bath, taxis, and chloroform, the tincture of belladonna was again used with success. The use of this drug was suggested from a knowledge of its action in obstruction of the bowels and its physiological action thereon.

BEEF-TEA. LIEBIG'S EXTRACT. EXTRACTUM CARNIS AND URINE.

Dr. Neale[3] calls attention again to the proper uses of these substances. He refers to some analyses which show that the most carefully prepared beef-tea does not contain more than one and one half to two and one quarter per cent. of solid matter, and that such matter resembles very closely the animal constituents of the urine, except that there is but a trace of urea. From this it may be seen that however good a stimulant beef-tea may be it cannot compare in nutritious properties with milk. It is not only in chemical composition that beef-tea resembles the urine, but its stimulating effects are similar. In South America the urine of small boys is spoken highly of as a stimulant in small-pox, and among the Chinese and Malays of Batavia urine is very freely used as a stimulant and general pick-up. He has frequently seen a glass of a child's or young girl's urine tossed off with great gusto and apparent benefit.

NAPELLINE.

Laborde and Duquesnel[4] have investigated the physiological and therapeutical actions of napelline, the soluble amorphous alkaloid of aconitium napellus. It is free from irritating properties, is less toxic and more hypnotic and anodyne than aconitine. Therapeutically it is reported useful as a substitute for morphia in the opium habit and as an anodyne in neuralgia. A centigramme (one sixth of a grain) may be given at a dose, and repeated every four or five hours. No bad effects follow its use, and it is free from a tendency to disturb digestion.

SALICYLATES IN RHEUMATISM.

In a discussion on the treatment of acute rheumatism by the salicylates before the Medical Society of London,[5] a very large number of cases were brought forward, and the opinions of those who have had a wide experience in the treatment of this disease were elicited.

Dr. Coupland in a very careful analysis of eighty-four cases treated with the salicylate of soda finds, in general, a very marked amelioration produced by the drug in the severity of the joint affection, and, as a rule, its influence over the pyrexia is even more striking. His conclusions are: (1.) That in the majority of cases salicylate of soda speedily reduces the pyrexia and articular pain of acute rheumatism. (2.) That unless the administration be long continued relapses both of pyrexia and of joint affection are liable to occur. (3.) That such relapses are not *wholly* prevented from arising during the administration of the drug, and that in some cases they are distinctly due to the lack of proper precaution in matters of diet and rest, owing to the freedom from acute symptoms enjoyed by the patient. (4.) That the best method of its administration is in regulated doses, gradually diminished both as to amount and frequency. (5.) That no definite influence upon the cardiac or other complications can be observed. (6.) That the toxic effects are serious in proportion to the largeness of the dose, and perhaps to the state of impurity of the drug. (7.) Salicylate of soda is certainly "*anti-pyretic*," and to a considerable degree "*anti-rheumatic*." That its employment does not appreciably diminish the time necessary to keep the patient at rest more than under other methods of treatment, but that the immense relief given by its use in the abatement of pain and fever renders it by far the most valuable remedy for the disease at present known.

---

[1] New York Medical Journal, March, 1882.

[2] Batten, British Medical Journal, July 15, 1882.

[3] Practitioner, November, 1881, 343.

[4] Tribune Méd., October, 1881. New York Medical Journal, March, 1882.

[5] Lancet, January 7, 1882.

It was agreed by those who took part in the discussion that the fever and joint affection are relieved by the administration of the salicylates; as regards the questions of cardiac complications, relapses, and the dose of the drug, there was great divergence in opinion. According to Dr. Gelbart-Smith it is not to be disputed that this remedy has the power to reduce temperature, to subdue pain, and to diminish and prevent arthritic inflammation. While it is not to be doubted that by the use of salicylate the patient may be made more comfortable, it is not certain that the duration of the disease is shortened, or that the danger of cardiac complication is lessened. A very large number of cases taken before the salycilate treatment was in vogue were compared with a large number treated by that drug, with reference to the frequency of cardiac complication. So far as hospital statistics go there is nothing to show that the salicylate treatment has led to any diminution in the amount of cardiac complication in acute rheumatism.

Dr. Broadbent thought salicylic acid had no influence on the course of pericarditis, and in several instances he had been able to recognize the imminence and probable existence of pericarditis from the persistence of a comparatively high temperature in spite of the drug.

As regards the dose of the drug, Dr. Isambard Owen shows that with different dosage there is no difference in the total duration of the disease. Dr. Coupland endeavors to give as small an amount of salicylate of soda as possible, while Dr. Maclagan regards acute rheumatism as a malarial fever, and maintains that the salicylates must be given in full and frequently repeated doses. He prefers salicin to salicylate of soda, as it causes none of the deleterious effects of the salicylates, and is equally powerful.

Dr. Broadbent had seen very few unfavorable symptoms attributable to its action, and these he is inclined to believe are due to impurity contained in the drug.

Dr. Fowler confirmed this view, and held that no toxic symptoms occur in patients treated with the acid obtained from the oil of wintergreen. It was his experience that when salicylic compounds failed to control the disease at once nothing was gained by their continued administration.

AGARICUS IN THE TREATMENT OF NIGHT SWEATING.

Dr. Wolfenden,[1] after extensive trial, finds that atropia in doses of one seventieth of a grain yields excellent results. Its use is, however, accompanied with some danger on account of its poisonous properties. For this reason agaricus is to be preferred, since ten grains too much or too little produce no toxic effects. It is a light, bulky powder, having a bitter taste, and is best given with a little jam. Twenty grains at bedtime are usually sufficient, though thirty may be necessary. The only objection to the large doses is their great bulk; the bitter taste is not objected to by patients when they find how much benefit is derived from the drug. It has been used in about forty cases of night sweating with complete success, and is believed to be a most useful and powerful as well as harmless drug. The only ill effects of a large dose are sickness, which stops on diminution of the dose, or diarrhœa, which may be averted by combination with one or two grains of Dover's powder.

Dr. Young[2] found this drug very efficacious against night sweating, but when given with honey considerable nausea or even sickness was found to result. A tincture of the strength of ten grains to the drachm was found to produce equal effects. After the administration of the tincture complaints of sickness were made in only one case, diarrhœa was occasioned only once, and that in a case where this symptom recurred at intervals independently of the drug. Its laxative action was noticed by some patients as very satisfactory. A few grains of the principle, crystallizing in long needles, were afterwards extracted, and given in pill form, in doses of one twelfth of a grain. This was found to be the most acceptable form in which to give the drug, and therapeutic effects were practically the same.

It was used with excellent results not only in phthisical night sweating, but also in cases of sweating not dependent on phthisis.

Like atropine it acts quickly, and the effect is not permanent. It is necessary to repeat the drug every night, and its continued use does not lead to any lasting result. The action of the drug against sweating is not more marked than its effect in promoting sound sleep, and relieving troublesome cough, especially of phthisis.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY MAURICE H. RICHARDSON, M. D., SECRETARY.

MARCH 6, 1882. DR. BOWDITCH reported briefly a case of

SEVERE DISEASE OF THE HEART, WITH PLEURITIC EFFUSION ON BOTH SIDES.

The patient has been tapped in all eleven times during six weeks, with great advantage to the condition of the heart. At first there was orthopnœa. Now, after treatment by aspirating the pleuræ, he has become more comfortable, and may recover in part his health and live for some years, instead of dying during the present attack. He still has valvular disease of the heart, of course. One of the most striking points in the case now is diminished dullness over heart, with diminution of the strong impulse which existed at first. By relieving him of the effusion by operation we have made him a different man. In a similar case it seems important to aspirate as often as necessary, and on both sides on the same day.

---

[1] Medical Times and Gazette, October 8, 1881.

[2] Glasgow Medical Journal, March, 1882.

DR. WEBBER read the regular paper on

CEREBRAL ANÆMIA.[1]

DR. DENNY said: Not only may cerebral anæmia be symptomatic of general anæmia, or the principal phenomenon of some disease, as in post febrile delirium of convalescence, and thus involve the whole brain, but it may be confined to a limited portion of that organ.

The following is a case of cerebral anæmia due to valvular lesion of the heart.

A lady, sixty years of age, with mitral insufficiency and loud regurgitant murmurs, was under my care several years previous to death from heart disease. The symptoms for which she sought advice were vertiginous attacks, confusion of mind, inability to fix attention, and great depression of spirits, although throughout manifesting no real diminution of intelligence. The ophthalmoscope showed an anæmic condition of retinal vessels.

An impoverished state of the blood may constitute a condition of cerebral anæmia.[2] Chemical analysis of the urine of a man who had delusional mania, with hallucinations and epileptic attacks, who was under my observation, showed a much diminished excretion of urea and phosphoric acid, with pus, albumen, and blood.

I have seen insanity, during the war, among prisoners of war, resulting from cerebral anæmia due to scorbutus and inanition from lack of food.

Circumscribed cerebral anæmia may follow embolism plugging the vessels supplying the convolutions about the fossa Sylvii, resulting in aphasia, and such loss of speech may be ascribed fairly to a local anæmia in certain phases of epilepsy.

I have several times witnessed the symptom of epileptic aphasia, unattended with spasm, when the patient could resume the thread of his thought after momentary interruption.

Nothnagel[3] regards this symptom as due probably to localized vascular spasm in the region of fossa Sylvii, and this view is largely supported.

Epileptic vertigo, "*petit mal*," and certain epileptoid states, are with much probability due to similar local vaso-motor nerve disorder.

The occasional occurrence of transitory hemiopia in hemicrania, associated with vertigo and nausea, is best explained by the assumption of localized cerebral anæmia suddenly produced, as a vaso-motor spastic neurosis, limited to the origins of the optic nerve, namely, the corpora quadrigemina, corpora geniculata externa, etc., whose vessels are innervated by the fifth pair. This is the solution proposed by Galezowski[4] in treating of ophthalmic migraine, four cases of which he reports.

I have met with three similar cases: I. A very intelligent lady, sixty years of age, subject for many years to severe attacks of hemicrania associated with flashes of light, vertigo, and nausea, had at rare intervals sharply defined hemiopia, lasting but a few minutes. The first attack occurred at the age of fourteen, and was usually precursor to headache lasting several days, and often occurring at about the menstrual period.

There never was any sign of hysteria. Usually the right half of any object would be blank, although sometimes it would be the left. This would be followed by a dazzling luminosity on the same side, as the temporal half of the right eye and nasal half of the left. Following these symptoms would be headache and nausea.

These attacks occurred between fourteen and twenty-five and then ceased, but recurred with greater force at the menopause in form of right hemicrania. A milk diet, with iron, quinine, etc., resulted in dispelling the trouble.

II. A music teacher, forty-two years of age, very energetic and successful, subject for many years to occasional hemicrania, had well-marked brief attacks of hemiopia, followed by zigzag light. A correction of irregular refraction by proper glasses, with rest, resulted in recovery.

III. A lady aged twenty-five, while pregnant, had well-defined hemiopic attacks. She said, "Everything I looked at would be only one half." Hemicrania, nausea, and vertigo followed such phenomena. At such times she had photopsia in form of zigzag light sensations. Uncomfortable feelings in the occiput were complained of also. Rest, diet, and tonics produced a very marked alleviation of all symptoms, which is still increasing.

In partial epilepsy where the spasm is confined to a single limb, as in epilepsia Jacksonia, it would also seem most probable that local cortical anæmia, resulting from a circumscribed vaso-motor neurosis, was induced.

The two following cases occurred under my observation: —

I. A young man aged eighteen, who in early life had had hemiplegia, with subsequent epilepsy, exhibited at length the symptom of epilepsy confined to one arm only, followed by temporary paresis of that member. Treatment with bromides produced an amelioration of symptoms.

II. A young man, twenty-six years of age, presented the symptom of slight shaking of an arm, with subsequent brief paresis. On one occasion I tested the strength of the hand just after an attack, and found it very much reduced, by the manometer. Full strength recurred within ten minutes.

This man worked in a foundry, and was troubled by dropping his tools during such attacks.

DR. EDES asked whether any demonstration had been made that these cases are due to cerebral anæmia. It is an ingenious supposition.

DR. WEBBER. The supposition may be made from the patient's general condition. Anæmia of the brain may exist just as anæmia of the rest of the body. It is so with local anæmia. The idea of local anæmia has, however, been questioned.

DR. EDES. There has been a good deal said about local anæmia of the spinal cord, but this theory seems to be destitute of foundation. The anæmic theory with regard to the action of drugs is not as strong as it used to be. Such a theory of the action of bromide of potassium, for example, has very small foundation. This was a favorite idea of the action of many drugs which diminish the irritation due to contraction of arterioles.

DR. WEBBER. These symptoms are due, probably, more to exhaustion than to anæmia. To a brain which is in a state of exhaustion a temporary increase of blood flow may act as an irritant, while on a healthy brain it would have no such effect. A slight increase of blood supply is felt immediately by an exhausted brain.

---

[1] See page 415 of this number of the JOURNAL.

[2] Grasset, Traité pratique des Mal. du Syst. Nerv., 1881.

[3] Handbuch der Speciellen Path. und Therapie. v. Ziemssen.

[4] London Lancet, February 4, 1882.

DR. PARKS asked whether bromide of potassium is contra-indicated in these cases.

DR. WEBBER. In some cases, especially when combined with chloral, bromide of potassium acts well, with temporary relief where there has been loss of sleep. The main reliance is nourishment. Many patients can take but a small amount of food. We must therefore feed at short intervals in small quantities. In a large number of these cases the supply of food is less than is desirable, and that is one of the elements that cause trouble. In chronic cases the patients are so interested in what they are doing that they neglect themselves, have less appetite, and less inclination for food. Sleep is also interfered with. The patient gets into such a state that it is impossible for him to become sufficiently quieted down to sleep. These two elements, insufficient food and loss of sleep, affect the brain unfavorably, and finally the patient becomes insane. Food and sleep are, therefore, the most important points in treatment. Bromides with chloral are the best drugs.

DR. PARKS. Suppose a chronic case where the most important thing is sleep, would it be good practice to give large doses of bromide of potassium?

DR. WEBBER. In many cases bromide of potassium is not so good alone as when combined with chloral. In some instances quinine is the best agent when the patient is worn out. Perhaps a little whiskey would be better.

In reply to **DR. JELLY** the reader said that, as a rule, in his experience, sleep comes after giving sufficient nourishment, more readily in acute cases than in chronic. Hypnotics are necessary for a short time. The paper was written to illustrate the fact that loss of food and sleep may cause a condition like mania, — hardly to be dignified by the name of insanity, — and not to treat the whole subject of chronic conditions caused by long-continued exhaustion.

DR. CHANNING asked whether in general cases of nervous exhaustion the reader thought cerebral anæmia to exist.

DR. WEBBER said more than any other special condition. With lack of nutrition we are more likely to have anæmia than hyperæmia.

DR. CHANNING thought this condition sometimes caused by hyperæmia.

DR. WEBBER said from all we can learn the symptoms may arise from both conditions of anæmia and hyperæmia. An English authority has lately said that there is no such thing as cerebral hyperæmia. The cerebral blood-vessels are more full at some times than at others. There being an excess of fluid in one system of cerebral vessels (cerebro-spinal, lymphatic, and blood), the contents of the others give place to it, and the balance is thereby kept up.

DR. OLIVER, with regard to the use of bromide of potassium in nervous exhaustion, related a case. The patient, a lady, afflicted with the disease, traveled extensively in Europe without benefit. She suffered severely with wakefulness. Her physician gave her fifty to sixty grains daily of bromide of potassium in hot milk for a week. During the following week the dose was diminished one half. She became very drowsy; could not write her name. She seemed like a person with an overdose of the drug. After the third week she began to take some food, and after that she recovered very rapidly.

In response to **DR. CHANNING**'s request to explain the action of bromide of potassium, **DR. EDES** said that its action was a direct one over the nervous elements; it may be through interference of blood-vessels. Five or six times as much is given at a dose now as formerly.

DR. BOWDITCH said he could not help saying that we have used words in this connection for which we have no exact authority. It seemed to him unfortunate that prostration of nervous power should be considered as anæmic condition. He did not think we have any proof of that. Can there be an anæmic condition of the brain with flushed face and general fullness of the body? Does that seem like anæmia? Is anæmia a good name for these cases? So in the case spoken of by Dr. Denny he would like to know what proof there is that shaking of the arms is due to a local anæmic condition of the brain.

DR. WEBBER said, in reply, that in the first case he reported the patient was in a poor condition generally, having phthisis, and being badly nourished. She had been recently confined, and had had severe pulmonary hæmorrhage. Then the symptoms came on of loss of mental balance, with excitement similar to an attack of acute mania. In speaking of this case he thought himself justified in using the term anæmia.

DR. BOWDITCH. What proof existed of anæmia of the brain more than of the rest of the body?

DR. WEBBER. When we have cases of bleeding in the lower animals after the loss of a certain amount of blood we observe symptoms of excitement and spasm. It has been considered that this spasm and excitement are due to a diminution in the blood supply. Similarly in human beings improperly nourished, the brain may get into a state of irritability from lack of blood supply. Dr. Webber therefore thought that in the cases reported where there was great loss of blood he was justified in using the term cerebral anæmia. We have here a badly nourished patient, with symptoms similar to those existing in cases of bleeding to death. He considered it a fair inference that there was anæmia, and not an excess of blood in the brain.

The second case was not a case of hæmorrhage, but a case of insufficient supply of food, the patient having taken stimulants and living on tea and toast. The same chain of symptoms existed as in the other case, some of the symptoms being nearly identical. As far as he could judge Dr. Webber thought that the condition of the brain was the same in both cases.

DR. BOWDITCH still believed that the condition of this patient was one of anæmia of the whole body.

DR. WEBBER considered Dr. Bowditch's criticism good in many cases, but in two of the cases reported, from analogy and by inference, he considered the diagnosis of the anæmia of the brain a good one.

DR. BOWDITCH briefly described a case which he thought would prove that hyperæmia of the brain does at times exist.

The patient, a male, was troubled by some giddiness of the head, and for a long time had had some slight trouble with the kidneys. Excepting the giddiness and consequent discomfort he was very well, and continued to be so till a week before he died. On the Sunday before his death, while at church, he was seen to have some difficulty in finding or reading the hymn, which seemed to his wife very singular. He was able to walk home, ran up two flights of steps to his room without difficulty. At two P. M. he had some symptoms of drowsiness, and in the night some delirium, followed by somnolence. In the afternoon, before Dr. Bowditch saw him, he had slight convulsions, and at his visit seemed unwilling to let the light get to his eyes. His face was flushed to the last degree. His head seemed full of blood. His pulse was like whip-cord, full and hard. There was no paralysis; he could use both legs, and there was evidently no effusion into the brain. Dr. Bowditch said to the attending physician that the symptoms meant that the patient's head was full of blood, and that our fathers would have bled the man at once, and he believed that ought to be done now. This course was agreed upon, but, being resisted by the patient, leeches were used instead, and strong carthartics given, with irritating applications over the kidneys where there had been pain. A previous examination of the urine had shown the presence of pus, but no casts. He considered the case one of nephritis with some chronic trouble. Theory may say there is no such thing as hyperæmia of the brain, but clinical examination proves conclusively that this man had a head full of blood which was pressing on the brain.

The idea of denying the existence of such a thing seemed to him absurd clinically, however it may be theoretically.

Dr. Webber suggested a possible stagnation of blood in the brain. He thought there might be hyperæmia and congestion of the brain. The balance between the different cerebral fluids was not maintained in a state of health. He thought Dr. Bowditch's case had some interference with the circulation of the blood, something preventing the return of blood to the heart. One with an undue amount of blood in the head may really be anæmic because there is too much blood in the veins.

Dr. Bowditch asked to be informed as to the probable condition of the kidneys in the patient spoken of. Though there was considerable albumen in the urine there were no casts. There was some slight pain in the back. Is it necessary to find casts in cases of acute nephritis? May this case not have been acute nephritis?

Dr. Webber responded by saying he did not remember ever having seen a case of acute nephritis in which there were not also casts as well as albumen.

Dr. Denny: I should add in farther explanation that fully developed epileptic symptoms, with general spasms and loss of consciousness, had been fully developed previously in each case, and both improved under bromide treatment very markedly. I refer to these symptoms only as fairly attributable to, and best explained by, localized cerebral anæmia.

Dr. Sabine spoke of cerebral anæmia due to hæmorrhages, and asked how the amount of blood can be diminished at all in experimental bleeding of the lower animals.

Dr. Webber replied that the amount of blood can be diminished within the cranial cavity, but its place has to be supplied by a corresponding increase in the quantity of lymph or cerebro-spinal fluid or serum. There is a change in the relative proportion of these fluids, an interchange between them or between the brain and the spinal cord.

Dr. Sabine assented, but thought this interchange must be very rapid, which **Dr. Webber** said was the the fact.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

SECOND DAY'S PROCEEDINGS.

A resolution for a standing committee of five on the National Museum of Hygiene was adopted.

TEXAS CATTLE.

Dr. Rauch, of Illinois, read a paper on Observations in Regard to the Relative Size of the Liver and Spleen, and the Normal Temperature in Texas Cattle, by Dr. Joseph R. Smith, surgeon United States Army and medical director of the department of Texas. The paper was mostly taken up with the record of exact observations. The author thinks no danger to Northern cattle can result from the transportation of Texas cattle apparently healthy at the commencement of their journey North.

Dr. E. E. Holman, of Chicago, read a paper on

STOCK TRANSPORTATION.

He stated that stock in transit are often allowed to go one hundred hours without food and water. The story of the cruelties practiced on animals in transportation was almost incredible. The writer thought it almost if not quite as bad to kill these bruised, maimed, and crippled animals for food as to use those that had themselves died under such treatment. No amount of cooking is adequate to restore diseased tissue to health. The speaker recommended the use of stock cars, which will allow the stock to lie down, and also the use of refrigerator cars to transport meats. The greatest point to be gained is the education of the consumer up to the point of demanding healthy meat.

Dr. Vardi, of Washington, gave an interesting description of the abattoir at Turin, Italy, where a veterinary surgeon is employed to examine stock before and after killing. The meat is classified. All animals dying in the hospital are buried.

Dr. T. P. Wilson, of Ann Arbor, Mich., read a paper on

LIFE ON WHEELS.

He estimated that from 1,000,000 to 1,500,000 people are on the cars in this country daily. The first want is fresh air. Fifty or sixty persons in a car exhaust the oxygen in a few minutes. Sleeping cars are a little worse, and the lower berths are worst of all. Heating arrangements are defective. "I have long since ceased drinking water from tanks in cars."

Dr. James E. Reeves, secretary of the West Virginia State Board of Health, made a statement of sanitary progress in that State, claiming that it possessed one of the most perfect sanitary systems in the Union. The Board does not confine itself to sanitary work, but also controls and regulates the practice of medicine in the State.

USES AND ABUSES OF ANIMAL VACCINATION.

Dr. Samuel W. Abbott, of Wakefield, Mass., read a paper on the Uses and Abuses of Animal Vaccination, which provoked much subsequent discussion.

He announced that the object of the paper was to present for consideration the advantages which are offered by animal vaccination in preference to the older and, until the beginning of the past decade, the more common method of vaccination by humanized virus.

Until the occurrence of the great epidemic of small-pox in 1871–1873, throughout the United States, vaccination had been performed almost exclusively with humanized virus. There were some few exceptions. During the late war of the rebellion large quantities of crusts were supplied to the surgeons of the army for the purpose of vaccinating soldiers, these crusts having been obtained by the process of retrovaccination, that is, the vaccination of cattle with humanized lymph. This mode of propagation failed to win confidence, and the importation of animal virus in 1870 by Martin has introduced a new era.

The practice of animal vaccination is reasonable, and is preferable to any other mode. It is also a matter of the highest importance that every safeguard should be afforded, both by legislation and by private practice, to render its performance perfectly safe and efficient.

Reasons for its use: —

The impossibility of obtaining a supply of virus from humanized sources in sufficient quantity and with requisite promptness for use in times of epidemic.

The populous throngs of our large cities, and the occasional advent of small-pox among them, renders the production of large quantities of virus in a short space of time an absolute necessity.

To supply humanized virus in sufficient quantity would be almost, if not quite, an impossibility, and if it were possible to find a sufficient number of children it would not be safe to pronounce even one half of them a trustworthy source of virus. On the other hand, the virus obtainable from any bovine animal susceptible of vaccination is almost unlimited.

The possibility of the transmission of other diseases than vaccinia by inoculation with human vaccine virus was long denied, but the evidence of such transmission is to-day too overwhelming for denial.

The introduction of vaccination with direct bovine virus obviates the whole objection, and also disarms the opponents of vaccination in general of the most potent argument thus far urged by them.

The hypothesis of the transmission of bovine diseases has been urged. If this doctrine were tenable facts would have been adduced in its support, for the vaccinations with bovine virus in the United States alone within the past ten years may be estimated at not less than three or four millions.

A careful search in the records of vaccination and of anti-vaccination literature fails to reveal a single authentic case of such transmission.

The writer claimed that bovine virus was at least as efficacious as humanized, but he was not inclined to think with some that it was of any greater potency than well-selected specimens of the other variety. The importance of care in the culture of the virus was dwelt upon, especially with reference to cleanliness and selection of healthy animals. He prefers adults to calves and cows to bulls. The most satisfactory form in which to keep the virus is upon ivory points. The use of crusts and of capillary tubes was deprecated. Certain frauds in the preparation of the ivory points were referred to, notably the use of egg-albumen and of mucilage to charge the points in whole or in part.

CONTAGIOUSNESS OF TUBERCULAR CONSUMPTION.

Among the papers of the afternoon was one by DR. COGSHALL, of Flint, Michigan, on the subject, Is Tubercular Consumption a Contagious and Parasitic Disease? He maintained the affirmative of the question, and dwelt upon the possibility of infection of the human body by the flesh and the milk of tuberculous animals. The experiments of Professor Bollinger, of Munich, were cited in this connection. The recent discoveries by Koch were set forth as proving the parasitic nature of the disease.

COMBINED SEWERS.

A paper by DR. COMPTON, of Evansville, taking ground against combined sewers, and urging separate disposal of storm water and foul-house sewage, was followed by a general discussion of the question, in which opposite views were expressed, some members favoring the combined system and others thinking that the separate system was to be preferred, especially when the topographical conditions permitted the storm-water to be carried off by surface drainage.

A discussion, by assignment, followed, on the use of bovine or humanized virus, in which the customary arguments were adduced on each side.

NATIONAL BOARD OF HEALTH.

The evening session was occupied with a communication by DR. J. L. CABELL on the subject of the National Board of Health, which contained a vigorous protest against the action of Congress in withholding the pecuniary aid necessary to carrying out the policy of the Board. In support of his remarks on the value of the work which the Board had accomplished, he gave the following sketch of its achievements: —

(1.) Aid to State and local boards of health in the execution and enforcement of their rules and regulations to prevent the introduction of contagious or infectious diseases into the United States from foreign countries. (2.) Aid to the same parties in maintaining sanitary inspection on the Mississippi River. (3.) The inspection of immigrants with reference to the protection of the people of the United States from the introduction of small-pox by said immigrants. In connection with the above branch of the operation, Dr. Cabell cited the following passage from a report made to the Senate of the United States at the late session of Congress from the select committee to investigate and report the best means of preventing the introduction and spread of epidemic diseases. In this report the following statements are made with the unanimous approval of the committee: —

"The epidemic of 1879 at Memphis and New Orleans made its appearance before the National Board had been able to perfect its plans of prevention; though it is, in the opinion of the committee, doubtful whether that epidemic could have been prevented, as it is not certain whether it originated from germs of the epidemic of 1878 which had survived, or in fresh importation of the disease. But, under the rules and regulations adopted by the Board to deal with it, it was actually stamped out in New Orleans, and confined to the limits of Memphis; and, instead of the general demoralization and panic, with suspension of business, trade, and commerce, which pervaded the country in 1878, commerce and communication with the infected cities were regulated, not stopped, or even retarded to any considerable extent, and the general business of the country went on in its usual methods, and through its usual channels, without serious interruption. Instead of panic and alarm, confidence and a sense of security pervaded the country. The great transportation companies of the South, both river and rail, are unanimous in their approval of the action and methods of the National Board in dealing with such cases, because experience has shown that they give the necessary security against the spread of disease, without stopping or retarding to any considerable extent commercial intercourse. They have learned, from their own experience, that the certificate of the. National Board of Health as to the sanitary condition of any city or place is accepted by other cities and States as testimony coming from a strictly impartial and well-informed authority, independent of all local interests or influences, commercial or otherwise. In the opinion of the committee, it has accomplished much, and is capable of accomplishing highly important results of great benefit to the country, — results which can be accomplished by no other agency."

A number of speakers confirmed Dr. Cabell's view of the value of the work of the Board, and resolutions were adopted memorializing the authorities at Washington on the subject of preserving the organization and continuing its duties, instead of allowing them, as was claimed had been done, to be assumed by the Marine Hospital Service.

THIRD DAY. MORNING SESSION.

At a business meeting officers were elected. Among them DR. EZRA M. HUNT, of New Jersey, is President.

VENEREAL DISEASES.

A long majority report was presented by eight out of nine members of the committee appointed to consider this subject, containing the draft of a proposed bill for restraining the spread of infectious and contagious diseases by severe penalties against those who knowingly communicate such infectious maladies. One member of the committee dissented from the report, on the ground that such legislation would tend to bring about as the next step the registration of prostitutes. After some discussion the whole subject was laid on the table.

COMPULSORY REPORTS OF CASES OF INFECTIOUS DISEASE AND DEATHS.

DR. O. W. WIGHT, Health Officer of Detroit, read a paper on The Law requiring Medical Men to Report Cases of Infectious Disease and Deaths to the Authorities, in which he said: —

"The obligations of physicians to furnish the public health authorities with death certificates and reports of contagious diseases in their practice not only pertain to the higher plane of legal duties, which is above and beyond mere property considerations, as viewed in the amendments of the Federal Constitution and in provisions of the constitutions of various States, but may be construed as in the nature of a license. Every lawyer, when admitted to the bar, must pay a fee in order to be enrolled in the list of attorneys. The State, in the exercise of its police power, may impose any reasonable condition on the practice of medicine. It may require an annual license fee, or it may allow any man to practice physic or surgery only upon the condition that the practitioner shall furnish the public with certificates of death and information of the existence of infectious diseases within the sphere of his professional work. It is hardly necessary to say that the State may invest its municipalities with so much of its sovereign power as is necessary to impose the same conditions. If medical men, in any particular locality, wish to test the validity of statutes and ordinances requiring them to make death certificates and report cases of infectious diseases, my sincere and earnest advice to them is, that they proceed by a courteous demand for compensation, and not by a defiant refusal to obey law. They will thus secure the sympathy, if not the coöperation of the health authorities. The public, for w o benefit and protection the State uses its almost unlimited police power, will in that case be more inclined to treat the claim with consideration."

In the afternoon further discussion took place on the vaccination question, following a paper by DR. HIBBARD, of Richmond, in which the ground was taken that compulsory vaccination was impracticable.

Among the evening papers was one on

CREMATION OF HOUSEHOLD REFUSE AND EXCRETA.

by COLONEL J. M. KEATING, of Memphis, taking strong ground in favor of such cremation. Sewage of necessity pollutes bodies of water into which it flows and poisons the fish. Every family should have its own offal crematory. Rockdale, England, has a public crematory that works well. Fire destroys utterly; water assimilates and recreates.

There was also a paper on the need of open areas in large cities, by D. T. NEWHALL, of Providence, R. I.

The usual votes of thanks were passed, and after an announcement that the next annual meeting would be at Detroit, the society adjourned.

— Professor Rossbach (Berlin klinische Wochenschrift) recommends apomorphia as an expectorant. He says that it will convert a hard, dry cough into a moist, easy one, and will increase the expectoration. It may be given with or without morphia, and should always be kept in a black bottle. He recommends this prescription: —

℞ Apomorphiæ hydrochlor.	0.003–0.05 gm.	
Acid. hydrochl. dil.	0.50	
Aq. distillatæ	150.00	M.

S. Dose a teaspoonful, repeated every two hours if necessary.

— Differences are reported between the local Board of Health at Pensacola and the Marine Hospital Service, on account of the establishment by the latter of a cordon. It is claimed that this cordon is maintained by civilians who are simply sanitary agents of the hospital service. Yet it is denounced by the Pensacola Board as a military interference on the part of the central government. The National Board of Health is reported to side with the local board as against the action of the Marine Hospital Service. As to the rights of the case we have no information beyond the daily press.

The Mayor of Boston has issued an appeal for contributions for the suffering city, in which he says that they can hardly look for relief from the disease by frost before the middle of November.

— Lest any of our readers may misunderstand a statement in the daily press that a specimen of *Bubo Virginiana* was lately seen in Pemberton Square, we take occasion to explain that this is merely the expression of the scientific reporter for the great horned owl which lately appeared in that locality.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 2, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

DR. OLIVER WENDELL HOLMES'S RESIGNATION OF THE PARKMAN PROFESSORSHIP OF ANATOMY IN HARVARD UNIVERSITY.

SEVERAL weeks since we announced the report that Dr. Oliver Wendell Holmes had sent his resignation of the Parkman Professorship of Anatomy in the Medical Department of Harvard University to the University authorities. This report has since been confirmed and the resignation made public, and we therefore feel at liberty to take fitting notice of an event, which marks not merely an approaching change in an important professorship of a foremost centre of medical instruction, but also a retirement from a professorial service of thirty-five years, and therewith from direct connection with the medical profession, of one who has succeeded in performing the, to many, somewhat dry and prosaic duties of a teacher of anatomy, whilst devoting much time to the demands of general literature, and producing, both in prose and verse, some of the most delightful and original contributions which have been made to English literature on this side of the Atlantic.

After graduating from Harvard, Dr. Holmes first applied himself to the study of law, but this proving uncongenial he turned his attention to medicine, devoting himself to its study at home and abroad from 1834 to 1836. In 1838, two years after receiving his medical degree, he was elected to and accepted the professorship of anatomy and physiology in Dartmouth College, which he exchanged for the same position in the Harvard Medical School in 1847, succeeding Dr. John C. Warren. He has taught and lectured through successive years since, his instruction being given more especially in anatomy. Physiology was made, a few years ago, a separate department under another professor.

Dr. Holmes has been careful, industrious, and punctual in the discharge of his duties, — brilliant he is sure to be in what he undertakes, — and has made anatomy interesting to his classes, and something more than a mass of dry bones, ill-smelling muscles, long names, and musty relations, which is too apt to be the light in which it is regarded by the average student. His personal qualities and acquirements — his broad views, his clear, incisive well-chosen English, his nervous, animated delivery, his wit even — have unquestionably, as we have said, increased the reputation of the School with which he has been connected, and rendered the branch which he taught more attractive to its students; but, on the other hand, it is only fair to say that we think there can be no question that the studies and duties of the professor have been of no little profit to the author, and that possibly a certain tendency to wander among metaphysical speculations has been modified by the acquisition and imparting of a branch of learning based, as anatomy is, upon observed facts and analogies deduced therefrom.

Dr. Holmes practiced medicine for some years, but withdrew from its practice in 1849; he was also for a time connected with the Massachusetts General Hospital as a visiting physician, and was a member of various medical societies. His relation to Medicine, apart from his duties as a teacher, will be best seen by a glance at a list of what he has written and published on medical subjects.

In 1838 his Boylston Prize Dissertations for 1836–37 were published. That for 1836 was on Indigenous Intermittent Fever in New England. In 1837 the two prizes for the two subjects proposed were taken by his essays, one being on the Nature and Treatment of Neuralgia, the other on the Utility and Importance of Direct Exploration in Medical Practice. A review of these essays appeared in the *North American Review* for July, 1838; the first one, that for 1836, on Intermittent Fever in New England, retains very considerable interest and importance for professional and general readers at the present moment.

Two lectures on Homœopathy and its Kindred Delusions were addressed to the Boston Society for the Diffusion of Useful Knowledge, and appeared in 1842, and a report on Medical Literature was published in the Transactions of the American Medical Association for 1848. An essay on Puerperal Fever as a Private Pestilence should not be omitted from this list, for it manifested much sound scientific judgment and reasoning; this was first printed in 1843, and reprinted with additions in 1855. Some More Recent Views on Homœopathy appeared as a contribution to the *Atlantic Monthly* for December, 1857.

When the old custom of delivering formal introductory and valedictory lectures to the students at the opening and closing of the winter's work at the Harvard Medical School still obtained, several of these were given by Dr. Holmes, and published by the classes who were privileged to hear them in pamphlet form. The introductory lecture delivered before the medical class of Harvard University in November, 1861, after some slight revisions, was published in book form in 1862, under the title of Border Lines of Knowledge in Some Provinces of Medical Science. In March, 1858, Dr. Holmes delivered a valedictory address at the annual commencement to the graduating class of the Harvard Medical School.

This lecture and the essays and papers previously referred to, except the Boylston Prize Dissertations and the report on Medical Literature, were published together in book form in 1861, the volume becoming well known and widely read under the title, Currents and Counter-Currents.

The productions hitherto referred to are all of a professional character. An address entitled Mechanism in Thought and Morals, delivered before the Phi Beta Kappa Society of Harvard in 1870, has a semi-professional character, and has gone through six editions in book-form, with notes and afterthoughts, as a separate publication. The chapter on the History of Medicine in Boston, in the Memorial History of the city, published in 1880 on the two hundred and fiftieth anniversary of its founding, was written by Dr. Holmes and Dr. S. A. Green.

Several shorter communications on medical subjects and biographical notices from Dr. Holmes's pen are scattered through the pages of this journal, to which he has been a frequent and ever-valued contributor, a warm and constant friend and supporter.

But several more important contributions within the last few years, which have not yet been republished, deserve especial mention. The dedicatory address at the opening of the new building and hall of the Boston Medical Library Association, of which Dr. Holmes is the president, was a scholarly and characteristic production on the congenial subject of books and libraries, offered to a congenial audience of old friends and associates. It was read December 3, 1878, and was published in this journal.[1] His reply, in the same official capacity as president of this Association, on the occasion of the presentation of the portrait of Dr. J. B. S. Jackson, also appeared in these columns;[2] and in the same volume,[3] a little later, the poem written for and read at the Centennial Anniversary of the Massachusetts Medical Society, June 8, 1881. Dr. Holmes's last contribution to the JOURNAL, and almost his latest appearance in print, was a lecture on Medical Highways and Byways.[4] This lecture was delivered before the students of the Medical Department of Harvard University, May 10, 1882, and in some respects was an outgrowth and amplification of his lectures on Homœopathy and Kindred Delusions thirty years earlier before another audience.

Dr. Holmes resigned his professorship that he might have more leisure to devote to literary work of an especially congenial nature, and not, we are glad to understand, from any consciousness of decreasing strength. If we are correctly informed, a finally revised edition of his works will be prepared under his personal supervision, than which there can be no more agreeable or suitable occupation for the green years following the threescore and ten of an author who, though having written much, has given nothing to the world of which he has cause to be ashamed.

Although Dr. Holmes has severed the chief link connecting him directly with the medical profession, we still hope he may long be spared to us as an eminently happy and characteristic type of the best products of New England.

— The President has appointed George E. Waring, of Newport, R. I., a member of the National Board of Health in place of Dr. Charles F. Folsom, of Massachusetts, resigned.

---

[1] Vol. xcix., page 745.
[2] Vol. civ., page 560.
[3] Page 577.
[4] Vol. cvi., page 505.

ANNUAL REPORT OF THE SURGEON-GENERAL, U. S. A.

THE Report of the Surgeon-General of the United States Army is always an interesting document, but more for its allied interests than for the figures of casualties and sickness in our present army. It deals in reminiscences to a certain extent. The severest work of the Department has grown out of the war of twenty years ago, and the portions of the report of most general interest refer to the Pension Department and the literary labors now being accomplished under the direction of the Surgeon-General.

In the Record and Pension Division information has been sought in regard to 61,630 cases during the year embraced in the report, which was an excess of 6590 in excess of similar applications the previous year. Answers have been furnished in 61,079 cases.

Reference is made in this connection to a progressive increase in the difficulty of search for record of the hospital treatment of soldiers who served in the late war. As time elapses claimants appear to be more than ever unable to furnish definite information concerning the date and place of their treatment. There is much evidence at hand to establish the fact that this difficulty does not arise from defective memory alone. It is to be regretted that there is too often a manifest failure on the part of those preparing declarations for pensions in pressing inquiries upon these important points, as it is the cause of much of the delay hitherto charged to this Office.

The detail of any sufficient number of clerks upon the very important work of copying the large number of worn and mutilated records now on hand, and rapidly accumulating, has been prevented by the increasing demand for replies to the Commissioner of Pensions. With the prospective addition to the clerical force, it is intended that this work shall at once be taken up, and the preservation of evidence contained in these important volumes be made secure by their duplication, so far as may be practicable and consistent with the object for which the increase of force is provided, namely, the final adjudication of all pension claims within a limited number of years.

The idea of a complete alphabetical index of all names borne on the records of the office has been considered and abandoned as impossible of accomplishment without a suspension of all ordinary business. A special examination, with the view of enumerating the names borne on records-in-chief, has been undertaken. On these registers-in-chief there already have been enumerated seven million four hundred and thirteen thousand eight hundred and forty-seven (7,413,847) names of sick, wounded, and deceased soldiers; and when it is considered that these are contained in less than one fourth of the number of volumes known to be on file, the magnitude of the work projected will be more justly appreciated.

The use of the library by the medical profession throughout the country is steadily increasing. Over three hundred requests for information were received during the year, coming from all parts of the United

States, and the total number of letters sent from this branch alone was over one thousand.

The manuscript of volume iv. of the Index Catalogue, which will include the letter E and part of F, is nearly ready, and the first part of it is now going to press.

An estimate has been forwarded for printing volume v., and it is specially desirable that this appropriation be granted in order that no delay may occur in the issue of this work, the practical value of which becomes more and more apparent as successive volumes are published.

The manuscript of the third surgical volume of the Medical and Surgical History of the War is now sufficiently advanced to allow the volume to be completed during the coming session of Congress, if no unforeseen delay in the printing occurs.

The great necessity of a fire-proof building suitable for the accommodation of the Army Medical Museum and Library, and their preservation, still exists. We have yearly noticed the annual statement of the Surgeon-General in regard to this matter, and we again join him in the hope that Congress may be induced to appreciate the great value of the museum, and provide for the fire-proof building required to place the collections beyond the chance of loss or injury.

◆

THE MEDICAL BENEVOLENT SOCIETY.

THE dinner of the Medical Benevolent Society, of which we have spoken in another place, and to which we called attention some time ago, was a most agreeable and noteworthy occasion. The funds of the Association are not large, the recipients of its bounties are not numerous, nor are the sums bestowed large in amount, but its charities are as unobtrusive as the strictest obedience to the scriptural injunction could require, and its object is one of special interest to the readers of the JOURNAL.

No exact account of its origin was given, but the act of its founders in establishing such a society before its charities were required showed the wisest foresight. They had already learned that the life of a physician from a financial point of view was one of little promise, and took steps which should lighten somewhat the burden of poverty, not for themselves or theirs, but for any needy among their fellows in the State.

The growth of their funds from the small annual contributions and occasional donations shows most careful hoarding. Nor does their charity seem open to the reproach of taking away the pride of self-support by fostering dependence. The small number of beneficiaries and the inconsiderable amount bestowed forbid such an unfortunate result.

The accounts of the financial results of the busy lives of medical men as given at the dinner were sufficient to make the most careless and the most prosperous realize the propriety of providing for the future of those left dependent by failure of health or sudden death. That life is the highest which is a conscious voluntary sacrifice; but if, worn out by the self-sacrifice, it becomes dependent on the charity of a forgetful and ungrateful world it may be one of the most miserable, and we know no object more worthy the contributions of medical men than the alleviations of the misfortunes of their fellow-workers.

One of the results of the anniversary of the Society will be, we doubt not, a more careful attention to the necessary provision for old age on the part of its individual members; but a result we hope to see will be an enlargement of the usefulness of the Society by a notable increase in its funds.

◆

MEDICAL NOTES.

— It is said that the heaviest brain ever weighed in the United States was taken from James H. Madden, who died in Leadville, Colorado, last July. The weight was sixty-two and a quarter ounces. The man was a professional gambler.

— Some of the druggists of Philadelphia have of late got into trouble by substituting in prescriptions ingredients of their own devising for what physicians have ordered. Two of the proven cases are in the practice of a veterinary surgeon, who in one case wrote for sulphate of quinine for a dog, and obtained sulphate of cinchonidia, and in the other received borax instead of boracic acid which he had ordered. A third druggist dispensed eserine sulphate for the eserine bromide that the prescription called for. The local press have been showing up these acts, and the apothecaries have received an advertising more extensive than complimentary.

NEW YORK.

— Thirteen women were graduated at the training school for nurses at Charity Hospital, Blackwell's Island, on the 26th of October. The exercises, at which ex-Mayor Wickham presided, were held in one of the large wards of the hospital, and addresses were made by Mr. Wickham, the Rev. Dr. Colyer, and Commissioner Isaac H. Bailey. Two essays on nursing and a valedictory address were read by the graduates, and a number of prizes were presented.

— At the meeting of the Board of Estimate and Apportionment held October 26th, the Department of Charities and Correction was voted an appropriation of $1,621,847.50 for the ensuing year, an increase of $309,347.50 over last year. The commissioners desire to obtain more efficient service in the institutions under their charge, and in order to do this have asked for this increased appropriation to pay the larger salaries necessary for the purpose. The Board of Health was allowed an additional amount of $10,000 for an increased summer corps of physicians, $20,000 for contingent expenses, and $13,000 for hospitals.

— There will be no lack of opportunities for post-graduate instruction in New York this winter. On the 7th of November the first course of lectures will commence at the New York Polyclinic, which has been organized for the purpose of teaching purely clinical medicine and surgery, didactic lectures forming no part of the plan of instruction at the institution. A portion of the college building, which is located in East Thirty-Fourth Street, is occupied by a free dispensary under the management of the Faculty, and the class, which will be divided into sections of a limited number, will, in addition, receive bedside and operating-room instruction in the various hospitals and other medical institutions with which the members of the Faculty are connected. There will be five sessions of six weeks each during the season, and thirty-six clinical lectures will be given on each subject during each session. In order to enable students to attend at whatever time will be most convenient to them they will be admitted at any date, and each ticket will be good for six consecutive weeks. Among the directors are Drs. J. Marion Sims, Frank H. Hamilton, Fordyce Barker, T. A. Emmet, Alfred L. Loomis, and Leonard Webber; and among the members of the Faculty are Dr. James R. Leaming, Professor of Diseases of the Chest; Dr. John H. Ripley, Professor of the Diseases of Children; Dr. E. Darwin Hudson, Professor of General Medicine; Dr. Louis Esberg, Professor of Laryngology and Rhinology; Dr. Landon C. Gray, Professor of Diseases of the Mind and Nervous System, and Electrotherapy; Dr. Andrew R. Robinson, Professor of Dermatology; Dr. John A. Wyeth, Professor of General and Genito-Urinary Surgery; Dr. Paul F. Mundé, Professor of Gynæcology and Obstetrics; Dr. David Webster, Professor of Opthalmology; and Dr. V. P. Gibney, Professor of Orthopedic Surgery. There are also adjunct professors in nearly all of the departments. Dr. Leaming is the president, and Dr. Wyeth the secretary, of the Faculty.

On the evening of Thursday, November 2d, Drs. J. Marion Sims and Harry Marion Sims will give a large reception at the Hotel Brunswick, in honor of Prof. Samuel D. Gross, of Philadelphia.

Miscellany.

THE MASSACHUSETTS MEDICAL BENEVOLENT SOCIETY.

THE meeting of the Medical Benevolent Society took place on Thursday evening, October 26th, at Young's Hotel. The guests who sat down to the long tables filled the dining room of the hotel. The *menu* was excellent, and the company were appreciative.

DR. WILLIAMS, the President of the Society, presided with accustomed grace, and after the clatter of forks and spoons had grown somewhat less energetic, and the smoke of the fragrant Havana was being wafted upwards like the incense of a thank offering, he called upon Dr. Langmaid to illustrate the perpetual youth of music.

In response to toasts to the State and city, letters were read from Governor Long and Mayor Green.

To the third toast, "As an offshoot and auxiliary of the State Medical Society, this Association offers its salutations to the Commander of the Faithful, Alfred Hosmer, President of the Massachusetts Medical Society," DR. HOSMER responded, speaking of the necessary association of medicine and benevolence. The practice of medicine requires the practice of charity both in a pecuniary and moral sense. The votary of science is more likely to be generous than he is to be rich.

DR. WILLIAMS then gave the following account of the Society from its foundation: —

Twenty-five years ago a few physicians of the Boston Medical Book Club united in organizing this Massachusetts Medical Benevolent Society.

Not, however, as a Mutual Insurance Company, to secure, for its members only, future benefits in a time of distress. Its assistance is extended to all such of the profession or of their families as may need and deserve its aid; and, in fact, thus far but one member has become a beneficiary; all the other recipients of the Society's charity have been from outside its ranks.

Few of the public are aware how scanty is the recompense received from their toilsome labors by the major part of the medical profession in Massachusetts. Some acquire a moderate competency; many obtain a comfortable support during their term of full activity, but can make little provision for disability or waning age; whilst many others have a life long struggle, without being able to secure a hopeful future for those they leave behind them.

Unlike most other corporations, even those organized for benevolent objects, we have no expenses. Our treasurer has kindly served, year after year, as the almoner of our modest bounty, so that the whole amount of our income can be distributed, in all parts of the Commonwealth, in unobtrusive help to those stricken down by infirmity, in comforting the widow, and aiding the fatherless. It is but little we have been able to bestow, but, as we shall be told by our treasurer, even so small a sum as sixty dollars yearly has lightened many a heavy burden and called forth warm thanks from grateful hearts.

The amount of our own contributions has been increased, and our efforts have been encouraged by legacies with which the Society has been endowed by benevolent persons, physicians and others, who have become acquainted with its work. For ourselves, we have not only the pleasure of rejoicing with those whom we have caused to rejoice, but, in our association for these unselfish ends, we have knit still more closely the bonds of professional fellowship. It was thought that this twenty-fifth anniversary should be celebrated in a manner to bring together a large number of the Society, and make the occasion pleasantly remembered, and in order that by an announcement of the results already accomplished the members may see that they have not labored and contributed in vain.

The treasurer, DR. MINOT, then gave some account of the finances of the Society. During the twenty-five years of its existence its property has slowly but steadily increased, and now amounts to $21,000. The income from this, aided by the annual assessments, enables us to distribute about $1000 annually among sixteen regular beneficiaries, and a few others who receive occasional aid. The allowance to regular beneficiaries has been raised from $40 to $60 yearly, as the state of our funds permitted. The Council has now decided to increase it to $80. Small as this amount is, it is most gratefully received by the beneficiaries, all of whom are in narrow circumstances. It should be remembered that the objects of our assistance do not belong to that great class whose misfortunes are mainly due to intemperance and vice. All of them are respectable, some of them are people of refinement and cultivation, who have become reduced, through no fault of their own, almost to want. They are chiefly composed of the widows and children of medical men who died before they were able to lay up anything for their families. It is on this account that we appeal with confidence to those who are more fortunately situated for means to help us in the furtherance of our object.

Dr. Williams then called upon Dr. Cotting in the following words: I now call upon the very youngest member of the Society, though for years one of its most active members, to whom acts of charity are "no more difficult than to a blackbird 'tis to whistle."

Dr. Cotting gave several instances of physicians who, in spite of busy lives, had died in comparative poverty.

Most interesting speeches were made by **Col. Henry Lee** and **Mr. Henry P. Kidder.**

As one of the founders of the Society, **Dr. Lyman** gave an amusing account of its first meeting, at which he had presided, with Dr. Holmes on one side and Dr. Bigelow on the other.

John C. Ropes, Esq., was called upon by an allusion to the memory of his brother, Dr. Francis C. Ropes, late surgeon of the Boston City Hospital, "too soon snatched away from the duties he was fulfilling with an ardent zeal and faithfulness."

Many other speeches were made, and music was not omitted. The meeting broke up at a late hour, the importance of the occasion and the objects of the Association being none the less appreciated because they had been means of so enjoyable a gathering.

INTRA-VENOUS INJECTIONS OF AQUA AMMONIÆ FORTIOR IN A CASE OF SEWAGE-POISONING.

Dr. J. T. Eskridge publishes in the *Philadelphia Medical Times* the report of a case interesting for several reasons. The patient, who had worked for five years as a sewer-cleaner without ever having experienced any unpleasant effects, and who was a muscular fellow thirty-six years old, went into a deep privy after having made the customary test of lowering a candle, which continued to burn brightly. Instantly on reaching the bottom he fell, overcome by the gas, which was believed to be either sulphide of ammonium or of hydrogen. At all events it was not carbonic acid gas, and the instance seems to show the danger of trusting to the light test in determining on the safety of entering such vaults.

As he fell his body became almost entirely covered by fæcal matter, his mouth pointing upwards, but still so close to the foul matter by which he was surrounded that some of the more liquid contents of the well could easily gain access to his air-passages during labored efforts at inspiration. He remained in this situation half an hour, when a rope was passed around his body, and he was hoisted from the well in an apparently lifeless condition. His rescuer was also very near losing his life, having just time to throw the rope round his companion, when he himself became insensible.

The patient was taken to the hospital, where he was found to have a high feeble pulse, great cyanosis, and frequent convulsions. Digitalis, brandy, atropia, and morphia were all injected hypodermically without effect, except that after the last two had been injected in the left arm the convulsions became nearly limited to that side, but were still very violent. At the end of one and a half hours he was apparently moribund, the respirations being sixty to the minute, of a puffing and jerking character, with tracheal râles, the pulse 200 and very irregular in volume, the convulsions and cyanosis intense and increasing. It occurred to the attendant that in view of the state of the capillary circulation, the cardiac frequency might be due to clotting of the blood in the heart, and that if anything could be gotten into the circulation to change the condition of the blood and rouse the man's vital powers for a short time, he, being naturally strong, might be able to throw off the noxious influences of the poison. For this purpose intra-venous injection of ammonia seemed to be indicated. One of the superficial veins at the bend of the arm was exposed, raised with the forceps, and there was gradually injected into it thirty-five minims of the undiluted stronger water of ammonia. (It was supposed at the time to be the diluted aqua ammoniæ.) The pulse was almost immediately lessened in frequency and increased in volume, but the stimulating effects soon began rapidly to pass away. Ten minutes after the first injection thirty-five minims more were injected into the vein, and this was repeated every ten minutes until one hundred and forty minims of the ammonia solution had been introduced into the blood. The character of the pulse was improved by each injection, the respiratory efforts becoming deeper and less frequent. The convulsive movements had by that time nearly ceased. Following the same indication the injections were then continued every fifteen minutes, with careful watching of the effect. After the tenth injection the pulse was 128 per minute, and did not again rise. After the twelfth and last he was able to swallow stimulants and food, and in ten hours after his attack was apparently conscious, though he had no subsequent recollection of anything that happened that day. The next day he was walking about, feeling quite well, and had no further symptoms except slight nausea and occasional diarrhœa for a few weeks. There was a small abscess at the seat of the injection.

The author concludes that the action of the ammonia was twofold, preventing the tendency to heart-clot and stimulating the respiratory centres in the medulla. In a similar case again he would dilute the stronger water with two parts of distilled water at a temperature of 110° F.

TREATMENT OF FRACTURE OF THE CLAVICLE.

Dr. Harvey L. Byrd, of Baltimore, in the *Medical News*, describes, figures, and advocates a new form of apparatus whereby he claims more certain results in fracture of the clavicle than can be gained by other means. Its object is especially to secure extension and counter-extension of the fragments. The apparatus is composed of two metallic plates of sufficient size to cover the scapulæ of an adult person. These are connected together by means of a flat steel bar, to which is attached a lever, extending over and fronting the anterior apex of the shoulder, through the distal extremity of which passes a thumbscrew from before backwards, and to the end of which a concave metal plate is attached, with its concavity looking to the anterior apex of the shoulder. This lever is adapted for transference to either shoulder. Screws are used for keeping the several parts in their proper places, and to allow of the adjustment of the apparatus to persons of different sizes. All parts of the instrument that come in contact with the surface of the body of the patient are nicely padded. All the necessary leverage for reducing the fracture and keeping the broken ends of the bone in apposition is obtained by means of the two plates in their action upon the inferior angles and dorsi of the scapulæ, which serve as fulcrums for drawing and keeping the shoulders backwards, and for the attachment of the special lever for action, as necessary, upon the shoulder of the fractured side. Thus the shoulder-straps, attached by buckles to the superior and inferior lateral margins of the plates, may be so adjusted as to meet all the requirements of a majority of cases, without bringing the special lever for the shoulder into requisition at all; and when the ordinary sling is added for the comfortable support of the elbow and fore-arm, the usual bandage, axillary pad, etc., become entirely superfluous and unnecessary. Any amount of leverage that might be desired, however, can be readily added to the apparatus by attaching buckles to the inferior lateral margins of the plates, for securing and properly adjusting a piece of webbing around the front and sides of the chest.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 21, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhœal Diseases.
New York	1,206,590	630	231	20.00	12.48	4.32	2.88	8.48
Philadelphia	846,984	303	88	13.20	4.29	6.27	3.96	—
Brooklyn	566,689	245	98	23.80	14.36	7.63	.45	9.43
Chicago	503,304	183	95	33.31	7.10	6.00	8.19	10.37
Boston	362,535	155	53	23.90	7.75	5.81	5.81	9.69
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	202	91	45.54	9.90	22.77	3.96	4.45
Cincinnati	255,708	100	46	19.00	6.00	4 00	2.00	6.00
New Orleans	216,140	103	20	20.39	.97	.97	—	2.91
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	61	27	31.16	11.48	8.20	6.56	11.48
Buffalo	155,137	75	34	46.66	1.33	24.00	1.33	11.99
Milwaukee	115,578	36	21	16.66	8.33	2.77	—	13.88
Providence	104,857	36	12	19.44	2.77	—	8.33	8.33
New Haven	62,882	—	—	—	—	—	—	—
Charleston	49,999	40	13	10.00	2.50	—	2.50	—
Nashville	43,461	20	10	35.00	—	—	5.00	15.00
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	16	9	37.50	12.50	6.25	6.25	12.50
Cambridge	52,740	19	9	36.82	26.30	10.52	—	10.52
Fall River	49,006	14	—	78.56	7.14	14.28	14.28	42.85
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	10	2	20.00	—	—	20.00	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	12	3	24.99	—	—	16.66	—
New Bedford	26,875	12	—	24.99	—	—	8.33	8.33
Somerville	24,985	5	3	20.00	—	—	—	20.00
Holyoke	21,851	8	1	25.00	25.00	12.50	12.50	—
Chelsea	21,785	4	2	50.00	—	50.00	—	—
Taunton	21,213	6	—	33.33	—	—	16.66	—
Gloucester	19,329	4	2	—	—	—	—	—
Haverhill	18,475	5	1	20.00	20.00	—	20.00	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	3	1	33.33	—	—	—	33.33
Newburyport	13,537	5	1	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	3	1	—	—	—	—	—
Fifteen Massachusetts towns	116,853	28	7	7.14	10.71	—	—	3.57

Deaths reported 2343 (no reports from St. Louis, District of Columbia, and New Haven): under five years of age 881: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 569, consumption 331, lung diseases 170, diphtheria and croup 164, diarrhœal diseases 159, typhoid fever 86, scarlet fever 36, malarial fevers 30, small-pox 26, whooping-cough 17, cerebro-spinal meningitis 12, measles six, puerperal fever five, typhus fever one. From *scarlet fever*, New York nine, Brooklyn and Cincinnati five each, Philadelphia and Buffalo four each, Chicago three, Boston and Baltimore two each, Pittsburg and Worcester one each. From *malarial fevers*, New York and Baltimore six each, Brooklyn five, Chicago four, Charleston and Nashville three each, Buffalo two, Taunton one. From *small-pox*, Baltimore 20, Chicago four, Philadelphia two. From *whooping-cough*, New York six, Brooklyn three, Philadelphia, Chicago, and Cambridge two each, Baltimore and Buffalo one each. From *cerebro-spinal meningitis*, New York three, Chicago two, Cincinnati, Providence, Worcester, Cambridge, Fall River, Salem, and New Bedford one each. From *measles*, New York and Pittsburg two each, Chicago and Cincinnati one each. From *puerperal fever*, Boston two, Philadelphia, Brooklyn, and Weymouth one each. From *typhus fever*, New York one.

Ninety-three cases of small-pox were reported in Baltimore, Chicago four, Cincinnati two; diphtheria 23, typhoid fever 35, and scarlet fever 13 in Boston.

In 32 cities and towns of Massachusetts, with a population of 898,186 (population of the State 1,783,086), the total death-rate for the week was 17.20 against 20.32 and 21.17, for the previous two weeks.

For the week ending September 30th, in 171 German cities and towns, with an estimated population of 8,521,990, the death-rate was 23.4. Deaths reported 3838: under five years of age 2018; consumption 468, lung diseases 252, diarrhœal diseases 240, diphtheria and croup 169, scarlet fever 108, typhoid fever 76, whooping-cough 65, measles and rötheln 26, puerperal fever 21, small-pox (Beuthen one) one. The death-rates ranged from 9.4 in Metz to 43.4 in Posen; Königsberg 30.5; Breslau 30.6; Munich 26.9; Dresden 21.3; Berlin 25.4; Leipzig 19.7; Hamburg 18.6; Cologne 22.3; Frankfort a. M. 21.2; Strasburg 21.9.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending October 7th, the death-rate was 19.9. Deaths reported 3228: acute diseases of the respiratory organs (London) 253, diarrhœa 132, scarlet fever 119, fevers 78, whooping-cough 70, measles 52, diphtheria 30, small-pox (London three) seven. The death-rates ranged from 12.6 in Halifax to 32 in Sunderland; Plymouth 15.4; Portsmouth 17.3; London 19.1; Newcastle-on-Tyne 20.1; Leeds 22.1; Liverpool 22.2; Manchester 26.8; Birkenhead 27.7. In Edinburgh 18.6; Glasgow 24.5; Dublin 19.9.

For the week ending October 7th, in the Swiss towns, population 494,390, there were 32 deaths from consumption, lung diseases 18, diarrhœal diseases 15, diphtheria and croup seven, typhoid fever five, scarlet fever three, whooping-cough one, puerperal fever one. The death-rates were, at Geneva 16.5; Zurich 24.8; Basle 15.5; Berne 14.9.

The meteorological record for the week ending October 21st in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
October, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.28 P. M.	Daily Mean.	7.28 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.28 P. M.	11.28 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 15	30.121	53	61	47	87	57	80	75	N	NE	NW	8	10	11	F	O	C	—	—
Mon., 16	30.149	55	59	48	77	93	100	90	N	NE	N	7	6	4	O	T	R	—	—
Tues., 17	30.016	61	67	52	100	87	97	95	NW	SE	SW	5	1	5	G	O	S	—	—
Wed., 18	29.966	65	79	58	100	92	94	95	SW	SE	SW	4	4	1	G	F	G	—	—
Thurs., 19	29.900	58	65	51	100	93	86	93	NW	SE	NW	6	4	8	G	R	O	—	—
Fri., 20	30.228	48	52	45	80	69	83	77	NW	NE	NE	15	10	2	F	O	C	—	—
Sat., 21	30.346	46	56	41	92	71	83	82	NW	E	NE	8	11	4	O	O	C	—	—
Means, the week.	30.104	55	63	49				87										37.43	.80

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 20, 1882, TO OCTOBER 27, 1882.

WILLIAMS, JOHN W., surgeon. To proceed to Vancouver Barracks, W. T., and report, upon arrival, to the commanding general, Department of the Columbia, for assignment to duty in that department. S. O. 168, Military Division of the Pacific, October 13, 1882.

KANE, JOHN J., assistant surgeon. The leave of absence, granted October 9, 1882, Department of the Missouri, is extended two months. S. O. 247, paragraph 3, A. G. O., October 23, 1882.

OWEN, WILLIAM O., JR., assistant surgeon, is relieved from duty at Fort Townsend, W. T., and assigned to duty at Vancouver Barracks, W. T. S. O. 148, paragraph 1, Department of the Columbia, October 6, 1882.

TURRILL, HENRY S., captain, assistant surgeon. Assigned to duty at Fort Omaha, Neb. S. O. 112, paragraph 3, Department of the Platte, October 23, 1882.

WILSON, GEORGE F., assistant surgeon, is relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Townsend, W. T. S. O. 148, paragraph 1, Department of the Columbia, October 6, 1882.

BANISTER, JOHN M., first lieutenant, assistant surgeon. The leave of absence granted by paragraph 5, S. O. 203, Department of the Missouri, October 10, 1882, is extended one month. S. O. 113, paragraph 2, Military Division of the Missouri, October 23, 1882.

BUSHNELL, GEORGE E., first lieutenant and assistant surgeon. Leave of absence extended one month. S. O. 244, A. G. O., October 19, 1882.

BUSHNELL, GEORGE E., first lieutenant, assistant surgeon. Extension of one month's leave of absence is revoked. S. O. 247, paragraph 2, A. G. O., October 23, 1882.

WYETH, M. C., first lieutenant, assistant surgeon, will be relieved from duty at Fort Meade, D. T., upon his return from detached service, and will proceed to Fort Yates, D. T., and report to the commanding officer of that post for duty. S. O. 172, Department of Dakota, October 19, 1882.

APPOINTMENT. — Dr. H. A. Gilman, who for the past sixteen years has been assistant physician to Illinois State Hospital for the Insane at Jacksonville, Illinois, has been appointed superintendent of the Iowa Hospital for Insane at Mount Pleasant, Iowa. Dr. Gilman is a native of Gilmanton, N. H., where he studied medicine with Dr. Nahum Wight.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at the Medical Library, 19 Boylston Place, on Monday, November 6, 1882, at eight o'clock P. M. Reader, Dr. M. H. Richardson. Subject, Tracheotomy, with a Report of Three Cases. Drs. George W. Gay and C. B. Porter will open the discussion. Dr. M. H. Richardson will also show a specimen of a Subcoracoid Dislocation of the Humerus. Election of new members. Balloting at nine o'clock.
C. M. JONES, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — The Question of Contagion in Leprosy. By James C. White, M. D., Professor of Dermatology in Harvard University. (Reprint from the American Journal of the Medical Sciences.)

On Slight Ailments: Their Nature and Treatment. By Lionel S. Beale, M. D., F. R. S. Second Edition, Enlarged and Illustrated. Philadelphia: P. Blakiston, Son & Co. 1882.

Studies in Pathological Anatomy. By Francis Delafield, M. D., Adjunct Professor of Pathology and Practical Medicine, Visiting Physician and Curator to Bellevue Hospital. Vol. I. Plates i.–xciii. New York: William Wood & Co. 1882.

Alcoholic Anæsthesia. By Lewis D. Mason, M. D. Read before the American Association for the Cure of Inebriates. 1882. Hartford, Conn. (Reprint.)

Medical Electricity: A Practical Treatise on the Applications of Electricity to Medicine and Surgery. By Roberts Bartholow, A. M., M. D., LL. D. Second Edition, Enlarged and Improved. Philadelphia: Henry C. Lea & Co. 1882.

Subjective Traumatism of the Eye. Its Importance when the Question of Sympathetic Irritation or Sympathetic Ophthalmia Arises. By W. S. Little, A. M., M. D. Philadelphia. 1882. (Reprint.)

Lectures.

INTRODUCTORY CLINICAL LECTURE ON DISEASES OF WOMEN.[1]

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, OCTOBER 6, 1882,

BY PROF. T. GAILLARD THOMAS, M. D.

PROFESSOR THOMAS, on the occasion of his first appearance before the class after resuming the professorship of clinical gynæcology, was received with great enthusiasm, and having explained the condition of health which led to his resignation of the chair, and expressed the very great pleasure which he felt in returning to his old place, he proceeded as follows: —

"In the olden time, on account of the shortness of the course, I was obliged to do a thing which I disliked very much, and that was to hurry over my cases in order to present to my classes as great a variety of different conditions as was possible in the limited time at our disposal. But now, thanks to the change in the college system, which has extended the term of lectures to seven months, I shall be enabled to go on more leisurely, and so will have abundant time to investigate each case with thoroughness, an improvement which I trust will prove as beneficial to you as it is satisfactory to myself. I shall, therefore, endeavor to introduce as *few* cases as I can at each of our sessions, and will devote the most careful attention to every one that I bring before you.

"The clinic will be worked upon an honest basis, and my purpose will be to teach you all that I can about the methods of studying gynæcology, so that when you go out into actual practice you may at least have a reliable foundation for your future studies. It will only be a rudimentary foundation at best, however, for the most that any of you can expect to learn here will be how to study. But that is a great deal, I assure you, and there will be need of honest application on your part in order to acquire it. In what I say to you I shall try to teach you only what I really know, and talk very little about what I do not know. The one great subject of all my instructions will be diagnosis, and my main object will be to teach you how to examine cases. In a course like this, treatment must necessarily be a secondary consideration, and you will have plenty of time and opportunity to study that when you leave the college.

"In the practice of a gynæcologist in a large city most of the cases come from the country, and why? Because the great mass of country physicians have not paid enough attention to the subject to be able to make a diagnosis in the diseases peculiar to women. Yet the diagnosis is all important. When such a case presents itself, too many a medical man will say to himself, 'I don't like gynæcological practice, and I will send the patient away.' Patients are thus frequently put to the expense of time and money involved in a visit to some, perhaps, distant city, and consulting a specialist, which might all have been spared if the family physician had known what he ought to have known. In no field, I assure you, can you afford more relief from suffering, and in none (to put the matter on the lowest footing) can you do more lucrative work, than in gynæcological practice. I would advise all of you, therefore, to try to meet with all the difficult cases that you can, and to go away from the college with the idea of always making an honest attempt, at least, to find out the nature of the difficulty. As I remarked before, all that you can be taught here is how to study. If you will learn this, when you go into practice, and are called into consultation with older physicians, you may very likely make a mistake in diagnosis, but they will at all events acknowledge that you know how to investigate a case, and confess to themselves that you will probably succeed in your profession.

"General practitioners too often, as I have said, do not make diagnoses in these cases. Let me illustrate this by an example. A woman comes to a physician with a tumor hanging down into the vagina. This may be either a fibroid polypus attached to the cervix uteri, or it may be an inverted uterus, as I now show you by a couple of rough diagrams on the blackboard. If it were the former it would be right to put the wire of an écraseur around its neck and remove it; but if it were the latter, the most disastrous results would, of course, be likely to ensue. Now the general physician, all for the want of a little attention to such matters, often cannot tell the difference between a fibroid polypus and an inverted uterus, and visions of suits for malpractice and ruined reputation rising before his mind, he sends the patient off to some noted gynæcologist. Yet see what an opportunity for making reputation he has lost, for the fame of his skill, if he had undertaken the case, might have spread far and wide through the neighborhood. Very likely when such a case presented itself this physician would put his finger up the vagina and feel the tumor, but not knowing how to pursue his investigations any further he could not decide as to its character. Now if you were to confine me to a digital examination per vaginam I would not be able to make out the nature of the case any more than he could, but with the other means for investigation at my command I can make a positive diagnosis in any such case. If the general physician has mastered these means, the only reason why he cannot find out what the tumor is is because he does not try. Yet if a gynæcologist of high reputation should cut off an inverted uterus under the impression that it was a polypus, he would suffer much more severely than if a general practitioner should do such a thing. Both have to take the same risks. Now, as to the question of diagnosis. If the tumor were an inverted uterus we ought to be able by conjoined manipulation to detect an "abdominal ring," while there would be an entire absence of the body of the uterus in its ordinary position. In order to secure sufficient relaxation of the parts to make the examination satisfactorily it might, perhaps, be necessary to resort to anæsthesia. Having found such a depression or "ring" we should conclude that it was probably an inverted uterus, although we should still not feel sure of the diagnosis. If, on the other hand, the tumor were a pedunculated fibroid we should certainly find another mass corresponding with the body of the uterus above. Furthermore, if it were a fibroid we ought to be able to pass the sound beside its neck up into the cavity of the uterus; while, if it were an inverted uterus, it would, of course, be totally impossible to pass the sound. Then we should naturally inquire into the history and rational symptoms of the case, and should, perhaps, be informed that the patient had been suffering from hæmorrhage and pain for five years. In answer to our inquiry as to what happened five years before she would, no doubt, reply that she had had a child at that time, and had never had any since. The rational signs would thus be found to support the physical ones, and the conclusion at which we would finally arrive should be that the tumor was an inverted uterus, and not a fibrous polypus.

---

[1] Reported by P. Brynberg Porter, M. D.

"The methods of investigation which I have here indicated should always be resorted to in every instance, and in this clinic I will try to show you how to begin in each case, and then how to conduct the examination until you can finally draw your deduction from the premises established. This is simply making a diagnosis, which may be defined to be a logical deduction from given premises, these premises being the rational and physical signs of the case. One point, however, I would wish you to remember always, and that is that a diagnosis is never certain. We draw the most logical deduction that we can from the premises in any given case, but even the most skillful and experienced of us are, of course, liable to make mistakes.

"Another thing that I want to teach you is, how to make gynæcological examinations in your offices. In the first place have all your preparations made in advance, including a special table for the purpose, so that you will not at the time have to clear off all the papers from your writing table, and thus give your patient the impression that such examinations are made very seldom by you. Have everything arranged as comfortably as you can, and she will feel reassured, instead of being rendered nervous and apprehensive. I need hardly say that no man who is not a gentleman should undertake the practice of gynæcology. In no department of medicine is it so essential that the physician should conduct himself so entirely beyond reproach, and guard his lips so carefully against the slightest suspicion of vulgarity. Another point of the greatest importance is, that you should be perfectly clean and neat in your persons. Want of cleanliness in gynæcological practice is, in fact, a crime. Every particle of dirt under the finger nails carries danger and death with it, and whoever puts his hand up into a uterus to remove a placenta, for instance, or even a finger into the vagina to examine such a case as I have been supposing, is likely to give the patient septicæmia if his nails are not perfectly clean. You may say that these are small points to dwell upon; but certainly nothing is insignificant which is thus capable of producing disease and death.

"At the clinic I will show you very little through the speculum, for the reason that in a room like this it is utterly impossible to see anything at all in this way. At one time I tried the plan of letting a few come down and look; but aside from the disturbance which this occasioned in the lecture-room, it was worse than useless for the students, who were able to see just enough to so completely confuse and perplex them that they were much more liable to make mistakes than if they had never had any such opportunity. In all cases, therefore, where the abnormal condition present can be seen only inside the vulva I shall make no attempt to show it to you; but in all other instances, where the patient is willing to have the exposure made, I shall be happy to show you whatever I can."

FIBROID OF THE UTERUS.

"Having now said all that I wish in the way of preliminary advice, I will introduce our first patient, and you will have occasion to notice to-day, as you will on many subsequent days, that I have a definite system by which I examine every patient that comes before me. This system I should like you to adopt also, because I believe it to be altogether the best that you can possibly use. It is not only here at the clinic that I resort to it, but also in my entire private and hospital practice.

"The patient's name is Helen McK. She is a native of the United States, thirty-five years of age, and unmarried. Judging from her appearance, she is evidently by no means a well woman. Her complexion, you notice, is of a light straw color, and she is apparently somewhat emaciated. Let us then proceed to get at the history. How long have you been sick? 'Ten years.' How have you suffered during that time? 'From pain in my back and sides, and, in fact, all over.' What else have you suffered from? 'Nothing else,' she replies. Well, you say at once, this is not a case for this clinic at all. Yet when we begin to cross-examine the patient in regard to the functions of the uterus, we find that this is her appropriate place. But why should we question her about her uterus when there is nothing in the symptoms to point towards that. I see but one reason why we should do so, and that is the pallor of her skin, indicative of anæmia. Let us, then, continue our questions. Are you regular in your monthly sickness? 'I lose too much blood.' How long does your sickness last? 'One week.' Do you ever have what is called a flooding? 'No.' But you do lose enough blood to make you feel wretched and weak? 'Oh, yes.' Here, therefore, is an important symptom, which she did not mention at all at first, menorrhagia. In answer to further questioning she states that the pain during menstruation is exceedingly intense; that it comes on one day before the flow, and ceases two or three days before the latter stops. She has no leucorrhœa. This case illustrates the method of examination very well. The patient gives us practically no symptoms whatever until she is drawn out; and this is frequently the case with those who have the most serious uterine disease, such as cancer in its advanced stages. Just before I went out of town for my summer vacation a lady came to me from a distance suffering from what she said was sciatica. I questioned her carefully about every organ, commencing with the head; and when I came to the uterus she told me that there was a most offensive discharge, which she said she had not happened to think of mentioning before. Then making a physical examination, I found that almost the whole substance of the uterus was eaten away by cancer, and nothing but a hollow shell left. Yet she had been under treatment for a whole year in the West, and had never said anything about the offensive discharge to her physician.

"I will now tell you what the examination by touch reveals in the case before us. The uterus was found to be pushed slightly to one side, but otherwise apparently perfectly normal, when the finger was passed into the vagina. By conjoined manipulation, however, a hard, movable mass, larger than an egg, was detected on the right side of the uterus. This is undoubtedly a fibroid, and it is this which occasions the patient's suffering. By disturbing the innervation of the uterus it gives rise to the hysteralgia, or uterine neuralgia, the pain of which is so intense. Then, again, the fibroid interferes with the circulation of the uterus, and thus keeping the endometrium in a markedly congested state, causes the menorrhagia to which your attention has been directed. The pain in the right and left sides of which the patient complains is probably due to intercostal neuralgia, which no doubt results entirely from the bad blood state of the woman.

"This case serves to show, then, the method which I hope you will adopt in your examination of patients. In many instances where we would not expect to find any uterine disease it can be detected in this way. Begin, therefore, at the beginning, and inquire about every organ; just as a magistrate, in looking for the perpetrator of some murder, will make as many arrests as possible, in the hope of fixing the crime upon some one of the individuals.

"A word now in conclusion in regard to the condition of the endometrium. In cases of this kind we are exceedingly apt to have the lining membrane of the uterus covered with little fungoid growths, which give rise to very profuse hæmorrhages; and their existence has already been proved here by the use of the copper wire curette, an instrument with which I would advise that the whole cavity of the uterus be gently scraped, for the purpose of removing all these small excrescences. It is often astonishing to see to what an extent hæmorrhage can be controlled by this simple means."

Original Articles.

AUTOPSY OF A CASE OF TRANSPOSITION OF THE VISCERA.[1]

BY H. AUGUSTUS WILSON, M. D.,

Pathologist to the Presbyterian Hospital and Ophthalmic and Aural Surgeon to St. Mary's Hospital, Philadelphia.

THE comparatively rare occurrence of the phenomena, an instance of which I am about to relate, will be, I think, sufficient excuse for occupying the time of the College. I regret that I am not able to offer a more complete record of the case; but a careful dissection was impossible without taking an unwarranted risk of septic poisoning, as the abdominal cavity was filled with fetid pus.

Frank M., aged twenty-one, died at the Presbyterian Hospital of purulent peritonitis. I shall ignore in this paper the pathological conditions found at the post-mortem examination, inasmuch as they have no bearing upon the subject under consideration.

The patient had been aware since boyhood that his heart was misplaced, and upon one occasion a physician told him that that was the reason he was left-handed. He had never been very strong; but it does not appear that he ever had any serious affection; the cause of which could be assigned to his misplaced viscera.

In 1878, when he first came to the hospital, Dr. James Markoe, under whose care he was, noticed that not only was his heart perceptible in the fifth interspace of the right side, but also by percussion ascertained that this organ occupied the same relative position upon the right side that it should upon the left. He found also that the liver and spleen were transposed, but no further changes seem to have been noticed.

At the time I made the post-mortem examination, I found externally nothing to indicate the great changes in the positions of the internal organs, except that the right testicle was suspended at a lower level than the left. When I had opened the thorax and abdomen and laid bare the organs contained therein, the appearance to me was as though I was looking at the body reflected in a mirror. It was like the photographer's negative.

The heart first attracted my attention, and was found to be normal in every respect, but occupying, as already noted, a position upon the right side. It looked as though it had been pushed over to its present position without changing materially its relations with other organs. The right side was the pulmonary side and the left the systemic side, and in this respect the organ performed its function in a normal manner. The aorta starting from the left ventricle followed a somewhat irregular course, crossing over the right bronchus and going from there to the right side of the vertebral column, along which it descended upon the right side. The branches given off from the arch of the aorta were the two coronary arteries unchanged, the innominate going up the left side of the neck and giving off the left common carotid and left subclavian. While coming from the right portion of the arch were the right common carotid and right subclavian.

The lungs were reversed. The right lung was found to be smaller, to allow space for the heart. It had two lobes.

The left lung corresponded in appearance to what is commonly the right lung, was shorter than its fellow, being pressed up by the liver, was broader, and had three lobes.

In the abdominal cavity the liver occupied the left hypochondriac and partly the epigastric regions, the large lobe to the left and the smaller ones to the right, the gall-bladder and everything else similiarly changed.

The stomach and intestines were transposed. The stomach was partly in the right hypochondrium and partly in the epigastric region. The pylorus extended forward and downward toward the middle of the abdomen. The spleen was on the right side, and attached to the greater curvature of the stomach.

The cæcum was situated in the left iliac fossa, and the colon ascended on the left side and crossed from left to right side of the abdomen. From there it descended and terminated in the sigmoid flexure upon the right side.

As already stated, the man was naturally left-handed. Hyrtl was the first, I believe, to advance the theory that we are normally right-handed because of the more direct flow of blood to the brain upon the left side. And this theory would be substantiated if all cases where the heart and great vessels were transposed were left-handed; but such is not the case. A few years ago a theory was advanced that right-handedness depended upon natural selection. But the easiest explanation is that from earliest infancy we are instructed to use the right hand always in preference to the left. When a person with transposition of the viscera is left-handed we may call it a coincidence. In any other view, it would be extremely difficult to account for the far larger number of persons whose organs are arranged normally and yet are left-handed. In the cases that are noted in the journals I have not been able to find statistics enough to draw any inferences, for, when this condition is noted, right-handedness appears to be as frequently met with as left-handedness in cases where the viscera are transposed.

Peacock, in his monograph on Malformations of the

---

[1] Read before the Philadelphia College of Physicians, October 4, 1882.

Heart[1] says that the most common of all the internal displacements is that in which the heart is placed upon the right side in a position corresponding to that which it should occupy upon the left, and that this displacement is almost always associated with more or less complete transposition of other viscera. Occasionally the heart is transposed while the other organs are unchanged.[2]

Among the earliest recorded cases are those of Servius and Schenkius in Rome in 1643,[3] and one by Riolan in 1652.[4]

The first case recorded in which the malformation was noticed during life appears to be that described by Morand[5] in 1666. This case seems to have attracted considerable attention at the time, and was said to have suggested to Molière the transposition of the heart and liver which he puts into the mouth of Sganarelle in his play of *Le Mèdecin Malgré lui*, published about the time this case was reported.

In cases of more or less complete transposition, the arteries, if they do not retain their natural positions, may be displaced in almost all conceivable ways.

Dr. Gamage[6] reported a case in which the aorta arose from the right ventricle and the pulmonary arteries from the left ventricle. Mr. Abernethy[7] saw a child ten months old, where the portal veins terminated in the vena cava, the liver being supplied from an unusually large hepatic artery. Mr. Douglas Fox[8] reported the result of a post-mortem examination in a case where the heart was transposed, and the aorta, after crossing the right bronchus, passed behind the lower end of the trachea, over the vertebral column, and pursued its usual course from there down the left of the spine.

For a very complete account of a case similar to the one I now report, and for an exhaustive study of the histology of such malformations, I will refer to Dr. Allen Thompson's paper in the *Glasgow Medical Journal*, vol. p. 220.

As regards the practical application of this case, it would be well to bear such abnormality in mind as a possible condition in cases brought to a physician's notice in an unconscious condition. It will readily be seen that considerable difficulty might arise in forming a diagnosis. In surgical operations upon thorax or abdomen it would prove a serious complication, as, for instance, in colotomy, paracentesis abdominis, or pericardii.

◆

REPORT OF A CASE OF HOMICIDE.[9]

BY C. C. TOWER, M. D., MEDICAL EXAMINER, SOUTH WEYMOUTH.

ON the evening of Thursday, July 7, 1881, I was notified by the selectmen of Braintree that the dead body of a person had been found in that town under circumstances which justified a supposition of violence. I immediately proceeded to the place where the body lay, which I reached shortly after nine o'clock. The night was cloudy and quite dark, requiring the use of lanterns to inspect the remains.

The body was that of a man five feet five inches in height, and, as I learned on inquiry, of an average weight of one hundred and forty pounds. It was lying in a recently mown field of grass four feet west from a high stone wall and parallel to it, the head being directed towards the south. Ten feet distant, in a northerly direction, was a farm-gate which opened into the field from a public highway called Liberty Street. No missiles, weapons, or other instruments of violence were discovered in the vicinity of the corpse. The position was right dorsal, the head being slightly turned to the left, the face looking upwards. The right arm was bent at the elbow, the forearm being elevated at an angle of nearly ninety degrees. The left arm was slightly flexed, the hand resting on the left hip. The right leg was strongly flexed, the foot lying beneath the left knee-joint. The left leg was extended.

The clothing consisted of vest, pants, and white cotton shirt, the sleeves of the latter being unbuttoned, ripped at the seams, and turned backwards underneath the shoulders. The head and feet were uncovered, the soles of the latter soiled and hardened, indicating that the deceased had been traveling barefoot.

The body was in a considerably advanced state of putrefaction and emitted a strong stench. The features were swollen and distorted beyond recognition; the color blackish, resembling that of a negro. Numberless larvæ in an active state covered the mouth and nostrils. The eyelids were wide open, the humors of the eye apparently coagulated and projecting in a spiral form from the corneæ. The scalp, particularly over the left parietal region, was emphysematous and softened. The upper lip presented at one point a slight protuberance, but no solution of continuity on its outer or inner surface. The teeth were secure and the tongue entire. The forefinger of the right hand bore marks of previous amputation, which, with a scar on the left arm, were the principal signs by which the remains were recognized.

The clothing having been removed, the skin covering the chest and abdomen presented a greenish-brown color, the cuticle being separated in small patches from the underlying derma by bloody serous fluid and by bubbles of gas of putrefaction. The whole trunk was greatly distended, so that when the clothing was unbuttoned it snapped apart and could not easily be brought together again. The scrotum and penis were enormously swollen, the latter spirally twisted.

Not having with me my rubber gloves a short piece of lath was used to remove the maggots, and in a measure assist in the examination of the body. Every portion of the body externally was carefully inspected, the corpse being turned one way and the other to fully expose every part. The sphincter ani was relaxed, and considerable fecal matter covered the adjoining region. *No external mark of violence was anywhere found.* The skin was nowhere broken, and the examination thus far failed to reveal any fractured bones.

On inquiry, I learned that the dead body had been discovered about three hours before my arrival by a person walking along the street whose attention was directed to it by the offensive smell. I learned also that the remains were those of William McCornish, a laborer, employed up to Saturday night of July 2d at a tannery in the village of North Braintree. McCornish was described as a man of intemperate habits and subject to periodical attacks of dipsomania, but he had been steadily engaged at his occupation of late, and was perfectly sober when paid off at the end of the previous week. Since that date, and up to the night of July 4th, he had been indulging his appetite for strong drink. He had been seen to pass along Liberty Street, within half a mile of the spot where his lifeless body was found, as late as ten o'clock on the evening of the national holiday. He was then barefoot, hatless, and otherwise dressed as above described, and evidently under the influence of alcoholic liquor. At a later hour he was believed to have been in the company of James McKenney and others, engaged in a midnight carousal. Such was the history, so far as I could ascertain it at the "view," of the last days and hours of the deceased. Although there were those present who, cognizant of these facts, were ready to declare "foul play," yet no evidence was presented to the medical examiner which was not perfectly consistent with the conclusion arrived at that death was the result of alcoholism. The remains were accordingly turned over to the undertaker for burial.

---

[1] T. Peacock, Malformations of the Heart, 2d ed., 1866.

[2] Sur l'Ectopie de l'appareil de la circulation et particulièrement sur celle du cœur.—Rep. Gen. d'Anat. et de Phys. Pathol., t. ii., 1826, p. 1.

[3] Thomas Bartholinus, Hist. Anat. Cent., ii. 29. Amstelodami, 1654.

[4] Allen Thompson, Glasgow Medical Journal, vol. i., 1853, p. 220.

[5] Méry, Memoirs of Academy of Paris for 1866.

[6] N. Eng. Journ. Med. and Surg., iv., 1815, p. 244.

[7] Philosophic Trans, 1793, p. 59.

[8] Lond. Med. and Phys. Journ., vol. li., 1824, p. 474.

[9] Read before the Massachusetts Medico-Legal Society, at the Annual Meeting June 13, 1882.

On Sunday, July 10th, James McKenney was arrested and held in custody on suspicion of having caused the death of William McCornish. On Tuesday, July 12th, I caused the body of McCornish to be disinterred, and made an autopsy in the presence of two men (not physicians) as witnesses. The putrefactive changes had advanced since the previous examination. The integuments were softer and more distended with gases.

On making the customary linear incision and dissecting the soft parts from the chest wall, the cellular tissues immediately below the left clavicle and the pectoral muscles on the left side were found to be infiltrated with particles of dark clotted blood. The second, third, fourth, fifth, and sixth ribs on both sides of the chest were fractured transversely at points parallel with the sternum, and about an inch from their attachment to the cartilages. The second and third ribs on the left side were also broken in a second place about an inch and a half outwardly from the first mentioned fractures and in an oblique direction. The fractured ends of the latter were somewhat splintered. The anterior surface of the left lung was extensively lacerated, and also infiltrated with dark clotted blood. The heart presented two ragged openings at its apex, one communicating with each ventricle. The pericardium contained little or no blood. The left pleural cavity contained by estimate three pints of clotted blood. On the costal surface of the liver were seen three parallel linear furrows, not penetrating the capsule, about three inches in length and three quarters of an inch distant from each other, corresponding in position to the edges of the adjacent ribs. The other organs of the chest and abdomen were sound and free from injury with the exception of slight pleuritic adhesions over the right lung. On examination of the head the skull was found to be uninjured, the dura mater normal, and the brain diffluent.

On Monday, July 18th, an inquest was held by Justice Bumpus of the East Norfolk District Court, and the prisoner recommitted to the Dedham jail to await the action of the grand jury. The case was presented to this body on the 6th of September, and a bill of indictment for murder was found. The trial before the Supreme Judicial Court for Norfolk, Justices Devens and Allen on the bench, commenced May 17, 1882, when James McKenney was arraigned for the murder of William McCornish. The prisoner was represented by John Eldridge and James J. Mahone as counsel. Attorney General Marston and District Attorney French represented the government.

The prosecution attempted to show that the injuries testified to by the medical examiner were produced by the prisoner, and that they caused the death. The line of defense went to show that the injuries described might have been accidental or made after death.

It is not my purpose to review in this paper the testimony produced in court except so far as it may be relevant to the medico-legal bearings of the case. Every government witness but one, who testified on this particular point, stated that no stones were lying near the body when discovered in the field. This witness stated that a stone as large as a spittoon, to which he pointed in the court room, lay within two or three feet of the head of the corpse.

Government witnesses described the wall as built mostly of rough split stone, three feet in thickness at the base, and two feet at the top, the height being four and one half feet on the street, and five and one half feet in the field. The face of the wall presented a plain perpendicular surface, the back of it being irregular, the stones projecting further into the field as they approached the base. These were mostly secure excepting a few small stones which had probably been placed on the jutting shelves after the wall was built. The wall was not cemented. The field was situated on the westerly slope of a hill, the inclination being gradual, and directed away from the wall.

Two undertakers and other government witnesses testified to the careful handling of the body in placing it in the coffin, — which was a large box, such as is usually employed to inclose caskets, — and to the subsequent care in transporting the remains to the cemetery, and in the burial and disinterment.

One witness for the defense testified to the thrusting of a stick by the medical examiner into the dead body; to the careless handling of the remains by the undertakers; and to seeing near the body as it was lying in the field quite a large bowlder stone, weighing some fifteen pounds or more, which he subsequently picked up. This witness, on cross-examination, admitted that the stone was found several rods from the gate, while, as already stated, the body lay only ten feet from it!

In giving my testimony concerning the external appearance of the body, both at the "view" and at the autopsy, I stated that the chest and abdomen were greatly distended. I stated also that at the autopsy the ends of the fractured ribs were in apposition; that although broken there was no displacement of the bones, and no depression of the sternum, these parts being kept in their proper position by the inflation of the cavities beneath with putrefactive gases; and that there was no evidence of disease or injury in any part of the body except as already stated.

My opinion of the cause of the laceration of the lungs and heart was declared to be that forcible pressure on the sternum and ribs was exerted to a sufficient degree to break the latter, and thrust their fractured extremities into the underlying organs; that the injuries were produced by violence, the kind of violence being forcible and repeated acts performed by an assailant's knees, applied to the front of the chest, combined with the weight of the assailant's body; or, possibly, that they were produced by the feet of a man in jumping; that death resulted in consequence of the injuries so inflicted, and that the breathing of the victim continued a few moments only after the receipt of the injuries.

Being interrogated by the district attorney as to the temperature of the atmosphere at the time of the "view," and for two or three days before, I answered that the highest temperature on July 7th, as recorded at the United States Meteorological Office in Boston, was 81° F.; that the temperature on the evening of that day, when the "view" was held, was 67° F.; and that during the three preceding days it had reached 80° F. every day except one.

During the cross-examination, the counsel for the prisoner elicited the fact that no mention had been made, in my description of the autopsy, of the condition of the pericardium. I then testified that I had made no memorandum in my note-book of the state of this organ, but that to the best of my recollection it was ruptured, and contained little or no blood. I was also questioned at some length by the defense concerning the condition of the liver; whether it was that termed "drunkard's liver." I replied that the liver of a drunkard presented no peculiar appearances by which it could be positively diagnosticated from the livers of persons who were not drunkards; that I was familiar with that which is known as "drunkard's liver," and that the liver examined at the autopsy presented none of those appearances. I stated that it was my custom in making autopsies to slice the different organs in order to ascertain their condition throughout, and that I presumed I did so on this occasion, but did not remember all the details of the operation. I was also asked whether I found any trace of alcohol in the brain, and replied in the negative; that in my opinion, in the advanced state of putrefaction of that organ it would be impossible to determine the presence of alcohol.

Having given in substance the material points of medico-legal interest in my testimony, we will turn our attention briefly to that of the medical experts, four of whom testified at the trial, two being summoned by the government and two by the defense.

Medical Examiner F. W. Draper, lecturer on forensic medicine in Harvard University, having taken the stand, testified that he had listened to the description of the medical examination as given by Dr. Tower, and that, assuming his statements to be true, death was caused by shock and hæmorrhage, the result of severe injuries to the heart and lungs by the application of violence to the front of the chest; that force applied externally to the thorax sufficient to break the ribs inwardly would subject the heart to great pressure, and the vessels of the lung would be torn, occasioning serious, if not fatal, hæmorrhage; that the amount of blood in the left pleural cavity was not enough, by itself considered, to cause death by hæmorrhage; that it would be impossible to give more than a guess as to the proportion of blood which escaped from the wounded parts before death, and that which oozed away after death; that in his opinion the injuries were inflicted before death; that the large amount of blood effused was useful in determining this point; that the splintered condition of the broken ribs on the left side of the body, the extent of the fractures of the bones and that of the rupture of the organs, indicated that these injuries were caused while the victim was still alive, because fractures made on the dead body are usually transverse, and without splintering, and because an amount of violence sufficient to break the heart and lungs in a dead body would have left undoubted marks — solutions of continuity — on the surface, whereas it is not uncommon to have in the living body extremely severe lesions of viscera by external violence without leaving any external trace; that the injuries discovered could be best explained as having been caused by the knees of a man pressing on the front of the victim's chest, and the extent and nature of the injuries — the double fracture of the ribs and the double injury of the heart and lungs — rendered it probable that the blows with the knees were repeated, and not confined to a single act of pressure; that the relatively greater amount of injury on the left side of the thorax favored the view that the death was by homicide, since this corresponded with the position and greater force of the right knee of an assailant.

It would be impossible, according to the testimony of this witness, for a man to fall or roll from the top of a stone wall, five and a half feet high, or for a stone to roll from such a wall upon him, and cause fatal injuries, such as those described, without causing other injuries, such as wounds of the face or fracture of the bones of the arms or fore-arms, or of the clavicles, that would be manifest on post-mortem examination. The only circumstances of an accidental nature that would readily account for the fatal lesions would be these: The deceased might, by running rapidly toward the wall, gain a considerable momentum, so that if, in attempting to leap the wall, he tripped, he would fall heavily forward in such a manner that, his head and arms being thrown backward, his chest would come against a stone of a size and shape to fit nearly the whole front of the thorax. It would be impossible that the lesions found could have been caused by such handling of the body subsequently to its discovery as was described in the testimony.

Assuming that the heart, lung, and ribs were all fractured, as described by the medical examiner, it is probable that death was instantaneous; certainly McCornish must have been incapable of resistance or of voluntary locomotion after these injuries were received.

On cross-examination he testified that he did not feel ready to place much stress upon the existence of extravasated blood as a sign of injury received before death. Clotted blood indicates only a probability, not an absolute certainty, that it was effused before death. The large quantity of blood in the left pleural cavity seemed to him to show that it was set free before and not after death. He would not be able to distinguish, by the external appearances of a body, between emphysema by air from injured lungs and that by the gases of decomposition. Bruise marks would not be visible after three days if decomposition, as described, had taken place. The heart resists decomposition longer than most other internal organs. The injury to the left lung in connection with the amount of blood escaped into the left pleural cavity were sufficient, in his opinion, to cause death.

Dr. W. C. B. Fifield, surgeon to Boston City Hospital, corroborated the testimony of Dr. Draper in almost every essential point. He attributed the injuries to violence inflicted during life, the kind of violence to have been a crushing force applied somewhat unevenly to the anterior surface of the chest, such as might be produced by a man kneeling on the breast of a person beneath him. More force, in his judgment, would naturally be used by the right knee than the left. Thus the multiple fractures on the left side of the chest, and the laceration of the lung on that side and not on the other, might be accounted for. From the description of the injuries he should say that the violence was frequently applied. He did not think it of much consequence in this case that the body should have been kept in the position in which it was found, in order to determine the cause of death, although it is of great importance in some cases. He did not consider that the conclusions as to the death reached at the autopsy were less valuable or correct because the body had been removed from the spot where it was first seen. From the description of the injuries death, in his opinion, was caused by laceration of the lungs and heart, as the result of outside pressure. He thought it impossible for the deceased to have received the injuries by falling from the wall. A stone falling from a great height *might* produce such injuries, but such height must be far greater than that of the wall described.

Dr. Henry G. Clark, surgeon, having heard the evidence of the medical examiner, testified that the injuries as described by him were sufficient to have caused death, but that they were not necessarily fatal, *limiting them to fractures on the right side of the chest and to hæmorrhage into the right pleural cavity;* that if the injuries were fatal, taking into consideration all the facts (that the blood escaped from the lung and small vessels, and not from any large vessel), some little time, from a few minutes to half an hour, must have elapsed before death took place, because blood does not flow in any great quantity after death unless from a large artery or vessel; that three pints of blood is a larger quantity than could have flowed in this case after death; that rupture of the heart either did not exist, or was caused by the post-mortem; that it was possible for one act of violence to have caused the fractures; that if the blow was a violent one, given upon the sternum, or caused by a fall upon something hard like a stone, it would have been sufficient to produce the fractures by a single act; that the breast bone will resist much greater force than the ribs; that he should not attach much importance to the fact of the fractures being transverse as an indication of having been produced before or after death, but should regard the circumstance of the fractures of the ribs being in a line with each other as an indication that they had been caused by a single blow; that the rupture of the lungs must have been produced during life, and that the injuries might have been received from a fall from a wall five and a half feet high.

There would be no way of distinguishing, according to this witness, between the effects of a blow from a stone falling upon the chest, or thrown upon it, and those resulting on the chest of a man who, in falling, has struck upon a stone. He did not think the injuries could have been made by the wheels of a heavy team. In his judgment the position in which the body was found was not that occupied by the person when he was struck. He thought he lived long enough to have turned over.

Cross-examination: He considered it quite possible that the injuries might have been caused by the knees of a very heavy man using force. Jumping with the feet might also have caused them if the assailed party was lying prostrate. In reply to a question, he said perhaps the heart resists decomposition longer than other organs provided there is no fatty degeneration. He further said there was no evidence of fatty heart in this case.

Dr. Thomas Waterman, assistant demonstrator of anatomy in the medical department of Harvard University, testified that death took place from laceration of the lung, from hæmorrhage and shock, and that the deceased might have lived from fifteen to thirty minutes after the injuries were received, as, in his opinion, the hæmorrhage was gradual by leaking from small pulmonary vessels. In the absence of positive evidence that the pericardium was torn, and understanding the medical examiner to testify that it did not contain blood, he should say that the wounds of the heart were made during the autopsy. He did not think it strange that no ecchymosis was found externally; he should not expect to find it where the force of the blow was spent, not upon the skin, but upon the internal organs, producing such extensive and serious internal injuries. Falling from a wall five and a half feet high could not have caused the injuries described. A stone of fifteen to forty pounds' weight falling from a wall of this height upon a man lying on the ground, four feet distant from the base of the wall, could not have caused the injuries, but a stone of one hundred pounds' weight might have done so. The injuries might have been received by a man, rum crazy, running on the top of this wall, and purposely throwing himself from it, by striking a rough stone either attached to the wall or lying near it. The hypothesis, however, was rather improbable. Placing the body in a box, carting it two or three miles, taking it out and burying it, could not have caused the injuries. The laceration of the liver was not a mortal wound, and might have been recovered from.

This concludes the medical testimony. It will have been observed that while all the expert witnesses agreed that the injury to the lung, hæmorrhage, and shock were sufficient to have caused the death, the witnesses for the government and the defense assumed opposite views as to the existence of the lesion of the heart and the pericardium, the medical examiner not having been able to swear upon the stand whether or not the latter organ was perforated. Obviously this uncertainty had an important bearing on the question of immediate death, or of its occurrence after a longer or shorter interval. The failure of the medical examiner to have observed closely at the autopsy the condition of the pericardium, or his failure to have recorded the circumstance of the inspection of this organ, proved in this case, so far as it had any important weight, to be a loop-hole for the defense. Fortunately for the ends of justice, the injuries to the lung alone were considered sufficient to have produced fatal results.

The matter of incising or not incising the liver would not deserve special remark were it not that it was called in question at the trial. Such a procedure would not ordinarily be incorporated in the record of an autopsy, inasmuch as it is the universal practice among medical men while conducting post-mortem dissections to make incisions into all internal organs, with a view of ascertaining their structural condition. The circumstance that the medical examiner was catechised upon this point only enforces the importance of what has been impressed upon us so ably by our president (in his address, What Constitutes an Autopsy ?), of the utmost care in all the minutest details of an examination for medico-legal purposes, as well as of making a full and accurate record of the same. As the trial frequently does not take place for a long time, — in this instance nearly a year, — no reliance should be placed on the unaided memory.

One other point in this connection requires notice. It has been my hitherto invariable custom to invite medical gentlemen to be present as witnesses to an autopsy. By some unfortunate chance none were invited on this occasion. Two motives may have deterred me from so doing: First, from the conclusions arrived at during the "view" I had no reason to expect to find internal injuries or marks of violence; second, I did not feel like imposing on my medical brethren such a disagreeable duty, as I knew this would be, without adequate compensation. It was only made tolerable to myself by the free use of disinfecting solutions, and by thorough protection of my person. The views of the attorney general concerning the fees of witnesses at autopsies[1] are pertinent to this point. "No compensation being fixed by law, they [witnesses] ought to be allowed such fees as, under the circumstances, are just. They may be, and in some cases ought to be, medical men, capable of sustaining the medical examiner in his view of the cause of death where it may require learning and experience. To ask a medical man to attend on such an occasion for the paltry fee of fifty cents is not only manifestly unjust, but unbecoming the dignity of such an inquiry."

The advanced state of putrefaction in which I found this body, considering from a knowledge of the facts that it could not have been dead more than seventy hours, was to me a matter of some surprise. According to authorities, from ten to twenty days usually elapse before the development of such putrefactive changes as were here present. It must be remembered, however, that a temperature of from 60° to 80° F. is that most favorable to decomposition. The body lay exposed to the direct heat of a blazing July sun nearly all the day-time — the heat being doubtless intensified by reflection from the wall — for three consecutive days, during which period there was no rain to cool the atmosphere.

This state of putrefaction rendered the discovery of marks of violence on inspection almost impossible. The tumid and discolored condition of the integuments completely obscured all marks of contusion if they had existed. Ecchymosis could not possibly be detected, and swelling could not be discriminated from distention post mortem. Moreover, according to Ogston, "putrefaction not only gives rise to appearances which imitate contusions, but it also, in a short time, obliterates all traces of them when actually existing."

To putrefaction I attributed also, in a great measure, the position of the limbs, especially of the right fore-arm, which was raised in nearly a perpendicular direction and without support. "It is well known," says the author already quoted, "that violent and painful diseases which prove suddenly fatal are favorable to the rapid formation of gases, which by agitating the limbs give rise to movements in the corpse mimicking those of life."

The absence of downward displacement of the sternum and attached portions of fractured ribs, which was described in my testimony, was attributed to the expansive force of gases generated within the body during the putrefactive process. Both at the "view" and the autopsy the anterior surface of the thorax was noticeably full and tense. Moreover, no mobility of the fractured bones was observed while moving the body or in making the primary incision at the autopsy. Only when revealed by the dissection was the existence of fractures made known. There is reason to believe that had the body been discovered soon after death the sternal region of the chest would have been noticeably depressed.

Concerning the opinion expressed by one of the expert witnesses that the rupture of the heart took place during the autopsy, or otherwise did not exist, no more need be said than that this opinion was based upon a misapprehension of the location of the injuries as described by the medical examiner. From an examination of the stenographer's report of the testimony given at the trial it appears that this witness took for granted that the injuries and the hæmorrhage were in the right side of the chest instead of the left. Obviously it makes all the difference in the world whether the injuries were sustained in the right side or the left, for the heart lying chiefly in the left cavity of the chest could not be punctured in the manner described if the fractures were "limited to the right side." The cause and manner of death, as well as the length of time which intervened between the receipt of the injuries and death, were all, in the judgment of this witness, determined upon a basis which was erroneous. There was, moreover, no evidence presented at the trial to show that the post-mortem dissection was carelessly made. The fact that the heart resists decomposition longer than other internal organs, as testified to by one of the government experts, and virtually assented to by this witness, — with the proviso that no fatty degeneration or other pathological condition of the organ existed to account for its softening, — threw the burden of proof, that the heart was torn during the examination of the body, upon the defense, which was not established.

It is well known that while the external surface of a corpse may undergo rapid putrefaction under circumstances favorable for its occurrence, the internal organs, especially the parenchymatous organs of the chest and abdomen, are usually much less advanced in decomposition. Such was the condition of the internal structures witnessed at this autopsy. Not only were the solid organs — the liver, kidneys, heart, and lungs — in a tolerably firm state of consistency, but the organs were less soft than is often found in bodies dead of acute disease when no putrefactive change has occurred. The brain alone was in an advanced state of softening, a condition easily accounted for when we consider that the head was uncovered and directed towards the south, thus receiving the full force of the sun's heat, and that this is one of the organs which under ordinary circumstances earliest commences to putrefy. Not only "the heart" but also "the lungs," according to reliable authority, "resist putrefaction for a long period, and traces of disease are distinguishable in them long after other organs are quite decomposed." "The liver," too, it is said, "may remain firm and compact for some months after death." As a matter of fact the heart was not friable, but firm and contracted and containing two rents.

For the same reason that the internal organs of the trunk were found to be in a sufficiently good state of preservation to bear careful examination, so capillary hæmorrhage into the areolar tissues and the pectoral muscles of the left thorax was clearly demonstrated, although ecchymosis externally could not be distinguished from post-mortem discoloration and tumefaction. That internal ecchymosis was discovered is proved by the fact that only on the left side, at the seat of the most extensive and severe injuries, was this appearance manifest. That the hæmorrhagic infiltration of the tissues alluded to was not a cadaveric condition is shown by its location on the upper instead of the lower portion of the body, and where it would not be produced by gravitation.

---

[1] Published in Appendix to Transactions No. 2, vol. i., of this Society.

The testimony other than medical, which was offered at the trial, was very conclusive as to the guilt of the prisoner. The case having been given to the jury, that body, after retiring over night, brought in a verdict of murder in the second degree. A sentence was imposed by the court of imprisonment for life, one day of which was to be solitary.

RECENT PROGRESS IN THE MANAGEMENT OF LUNATIC ASYLUMS AND CARE OF THE INSANE.

BY WALTER CHANNING, M. D.

OCCUPATION FOR THE INSANE.

The school system at the Richmond Asylum was established several years ago by Dr. Lalor, the superintendent.[1] The daily average number of male patients is about four hundred and fifty, and they are grouped into five divisions, which may conveniently be designated the receiving, the farm, the epileptic and the suicidal, the school (so called because the more intelligent patients are in this division), and the hospital. School exercises are carried out in all these divisions with the exception of the hospital, which contains about forty-two patients.

The farm patients, numbering about eighty-four, work during the day in the garden, at smith work and carpentering. As many as seventy attend school for an hour after supper three evenings in the week.

The receiving division, composed of recently admitted patients, numbers fifty, and of these about thirty attend school, and sixteen work on the farm. A few generally do not take to the school at first, but finding themselves isolated, soon fall into the exercises.

In the epileptic and suicidal division there are one hundred and thirty patients; about ninety of these attend school, being divided into two classes. The remaining forty are employed at painting, mason, farm work, wire-basket work, chimney sweeping, shoe and mattrass making.

The school division numbers one hundred and forty-four patients, and has about ninety in daily attendance at school. Fifty-four are engaged wholly in office, mason, farm work, tailoring, shoe-making, and plumbing.

It will be observed that there are a number of patients in each division who are employed at various industrial pursuits. This arrangement affords a convenient method of varying the occupations of patients, and at the same time keeps the patients within the influence of the school system. It is intended that the school system shall be brought to bear on every patient in the institution.

The mind, as a whole, being divisible into moral, mental, æsthetical, and physical faculties, the subjects selected for instruction must be such as will develop these faculties. The moral faculties are developed by religious instruction; the mental faculties by object lessons, lessons on color and form, reading, geography, and arithmetic; the æsthetic faculties by writing, drawing, and music; and the physical by drill and marching.

The object lessons are the most important, and have received great attention. Reading lessons are a favorite subject with the senior classes. Mathematical geography is an engaging feature. Drawing is also much liked, and the numerous sketches in the possession of the asylum are an evidence of the work done by the patients. Music might be termed the backbone of the system, for it interests the greatest number, and when all other means fail in engaging the attention of one suffering from an acute form of mental disease, the singing class is the first one to attract his notice.

Games and recreation form an essential part of the school system. Out-door games consist in cricket, lawn tennis, foot-ball, skittles, ninepins, etc.

Dr. Bowers[2] speaks of the great importance of occupation for the insane, and makes the surprising statement that in looking up what has been written in the *Journal of Mental Science* in its twenty-four numbers on this subject, if the index of Dr. Blandford is correct, there is but one paper, and that by a Frenchman! He says there is too little employment for the insane in private asylums. It consists, he is afraid, of a routine of regular and purposeless walks, with games interspersed. The idleness of patients in asylums materially retards recovery. The pent-up energy of patients must find some outlet, and often it is used in violent and destructive ways. Dr. Bowers has seen asylums for the wealthier classes where a continuous round of amusements was offered to the patients; still he felt it a disadvantage not to have some useful kind of work to offer, rather than a kind of dissipation which would tend to unfit them for the regular duties of life.

Dr. Bowers has in his private asylum seventeen male patients, and by degrees he has gradually introduced a system of compulsory employment for them, and they are now all at work out-of-doors when weather permits, with two exceptions, one being paralyzed, and one too old. In wet weather they work in the carpenter's, painter's, and engineer's shops.

To make a success of the "employment" system there are certain fundamental principles to be observed: —

First. That the work is not too hard.

Second. It must, for the upper classes, be free from any imputation of being menial.

Third. There must be constant variety.

Fourth. There must be abundance of recreation.

Fifth. There must be very good, nourishing food.

Woodilee[3] draws its patients from a large commercial and manufacturing class, receiving about two hundred new cases yearly, many of whom are suicidal and dangerous, yet a visitor may often go through the whole house without seeing any of the usual manifestations of excitement and fury so common among patients under the old form of restraint, confinement, and idleness. Work, chiefly out-of-doors, is what has accomplished these great results. One hundred and fifty of the men are regularly employed at out-door work in parties of eight or ten, each under the care of an attendant.

---

[1] On the Education of the Insane and the School System as carried out at Richmond District Lunatic Asylum, Dublin. By John Fox, Schoolmaster. Journal Mental Science, April, 1882.

[2] Employment in the Treatment of Mental Diseases in the Upper Classes. By David Bowers, M. D. Journal Mental Science, July, 1882.

[3] Report of the Barony Asylum for 1880. By Dr. Rutherford. Journal Mental Science, April, 1882.

The proportion of attendants to patients is certainly not greater than would be required were the patients treated on the old system of confinement in airing courts, with locked doors.

Beside the one hundred and fifty men who work out-of-doors, under the care of ordinary attendants, about thirty are employed as tailors, upholsterers, storekeepers, shoemakers, bakers, plumbers, blacksmiths, painters, joiners, engineers, and stokers, under skillful artisans.

About five hundred of the patients take their meals together. They occupy about twenty minutes at dinner, and then wait in their places at table until the attendants finish their meals at separate tables in the same hall. At nine and two o'clock they are drawn up in line, and inspected by the medical officers.

The asylum has never had any airing courts or inclosed spaces of a like nature about it, and is the only one conducted entirely on the open-door system. Even in the so-called refractory part there is not a closed ward, yet the asylum is within ninety yards of the Edinburgh and Glasgow Railway, which passes for three quarters of a mile through the grounds, is fenced only by a light iron railing, and has daily one hundred and ninety-five trains passing over it.

The use of wines and spirits is gradually diminishing at the asylum, the actual quantity used during the last year being only four bottles of whiskey for the males, and sixteen bottles of whiskey and twelve bottles of wine for the females. Beer is not used. The actual number of patients who have received sedative and narcotic draughts does not exceed twelve. Insanity is a disease of diminished vitality, and the system demands essentially invigorating treatment. Experience proves that out-door air and employment are best for this purpose.

At the Barming Heath Asylum in Kent, Dr. Davies says the patients are more cheerful, less noisy, and work better without beer than with it. For beer the patients receive water. The attendants receive £4 per annum, the laundry attendants £3, and the female attendants and servants £2 instead of beer. Many have become total abstainers.

PROVISION FOR INSANE CRIMINALS.

Dr. Knecht,[1] who is the medical officer of the only institution for insane criminals in Prussia, that connected with the prison at Waldheim, gives an interesting account of the system of classifying this class in England. It was the philanthropist Howard who, a hundred years ago, first called attention to insane inmates in prisons in his book on the State of Prisons. He spoke of the trouble they occasioned, and that they also occupied room intended for the ordinary prisoners. In 1800 a law was made that persons who were insane at the time a crime was committed should receive appropriate treatment. In 1816 another law specified that insane convicts should be sent to insane asylums. In consequence of this law a wing was set aside for insane criminals in the same year at the Bethlehem Hospital. In 1849 Fisherton House, a licensed or private asylum, began to receive this class. In 1849 Broadmoor was erected for both classes of insane criminals. Its capacity was to be four hundred and thirteen men and one hundred and fifty women.

In 1868 the unconvicted insane at Broadmoor constituted one half the population. Many plots and attacks on the officials constantly occurred. The conclusion was gradually arrived at that the insane convicts were much the worse class of the insane, and accordingly when, in 1875, Broadmoor became overcrowded, an insane department was added to the Invalid Prison at Woking. More recently a similar department has been added to the Invalid Prison at Parkhurst, Isle of Wight.

The system as now arranged in England is this: Persons who committed crimes when insane go directly to Broadmoor. All convicts of both sexes becoming insane in prison go to the Millbank Prison in London as the first step. Here they are kept secluded, and carefully watched for any indications of feigning. They are then, after three to six months, transferred, — the men to Woking or Parkhurst, the women to Broadmoor. There were 60 men and six women discharged from Millbank during the year 1879–80, 58 of the men going to Woking.

In March, 1880, there were 99 insane convicts at Parkhurst. At Woking, in 1880–81, there were 150 to 160. Of the latter number 95 were generally occupied, the greatest importance being attached to work. A system of marks for good behavior and work has recently been introduced.

The convicts received the ordinary diet, and had no favors shown them, as at ordinary asylums; notwithstanding they were in good health and required little severe discipline. The universal testimony was that such discipline as was required for ordinary prisoners was absolutely injurious to this class.

At Broadmoor at the close of 1879 there were 368 men, of whom 54 only were convicts, and 115 women. Of these 173 men and 82 women were employed at various occupations.

The general system, it will be seen, is most excellent in England, but the great difficulty is that for a large portion it is only *temporary*, for many of the insane convicts after the expiration of sentence go to ordinary asylums. Some form of *permanent* care must be provided, but as yet no plan has been decided on.

Dr. Knecht thinks the system of having an insane department connected with an invalid prison a good one, but does not approve of having such a department connected with a prison for healthy convicts. As there are now no invalid prisons in Germany, he would have a *special* asylum for insane criminals, at present connected with an ordinary asylum. The manner of building should somewhat resemble that of a prison, but the form of treatment should be that of an ordinary asylum.

Dr. R. S. Dewey, superintendent of the Eastern Insane Hospital of Illinois, says[2] that insanity is sixteenfold more frequent among convicts than in the population at large, or about 32 in 1000.

Many of the unconvicted insane belong, strictly

---

[1] Dr. Knecht, die Gegenwärtige Fürsorge für ein Verbrecher in England. Allgemeine Zeitschrift f. Psychiatrie, vol. xxxix., 1st and 2d vol.

[2] Differentiation in Institutions for the Insane. American Journal of Insanity, July, 1882.

speaking, to the criminal class. Belonging also to this **class** there are persons of entire respectability, and between the two extremes every shade of crime and lunacy. There are epileptic criminals, simulators, lunatics who know right from wrong, and lunatics who feign insanity. It is sometimes found that the most abandoned criminals are insane, and not infrequently it is difficult to determine whether a criminal is insane or only depraved.

There is a strong probability, however, that any insane person committing a crime is of an inferior moral organization.

It should be possible to find a proper place for each class of insane perpetrators of crime. All insane convicts, and the majority of the unconvicted, could go to a criminal asylum, and insane patients with dangerous homicidal tendencies should be added to this class. A proper tribunal should make the selection.

The United States might provide district criminal asylums, as is done in England and some of the European states.

At several of the recent meetings of the Société Medico-Psychologique this question has been very fully discussed. M. Christian stated that he did not believe criminal insane asylums a strict necessity. All lunatics are from the nature of their insanity irresponsible, and they may commit crimes at any time. Perverse instincts, also may be lost in insanity. You can never predict what an insane man will do from his past history. A good man, when insane, may become bad, or a hardened criminal may become a "sweet, good man."[1]

M. Motet said that although there might be no difference clinically between the criminal and the ordinary insane, the social side of the question should be considered. All men, sane or insane, committing crimes should render an account to justice. Because a crime was committed during an attack of insanity it does not cease to be a crime, and its perpetrator must always be a criminal; he cannot be classed as an ordinary lunatic. It will always be dangerous to set insane criminals at liberty, even when cured, as relapses are liable to occur. The best plan of treatment will be at asylums especially built for insane criminals.

M. Foville thought that law tribunals should have some responsibility in deciding on the insanity of criminals. If officials are ignorant of the subject they can learn from medical men, and their opinions will thus become of more value.

PUBLIC PROVISION FOR EPILEPTICS.[2]

Prof. F. Jolly, in Strassbourg, speaks of the tendency in medicine to specialties, as a result of which we see various hospitals erected for different classes of disease. Beginning with Moll at Würtemburg in 1865, we find the subject of special institutions for epileptics brought up in Germany. In France, as long ago as 1834, Freune spoke of it, and he has been followed by Delasiauve, Parrhappe, Lacour, Legrand du Saulle, and Lunier.

In considering the subject, the number of epileptics becomes of importance. Herpin, Oesterlen, and other old authors, gave a proportion of 50 to 60 epileptics in each 10,000 persons, but Moll reduces the proportion 10 in 10,000 in 1866, and in 1877 Lunier brought it down to nine in 10,000. If we take the population of Germany as 45,000,000, following the estimate of Moll, we shall have 40,500 epileptics. It is extremely difficult to say how many of these will need care in special hospitals or divisions of hospitals. Lunier places the number of epileptics in France at about 33,000, and thinks that 15,000 of these should receive hospital treatment. Only about 5000 are so treated at present.

In considering what provision shall be made for epileptics the following classes present themselves: —

(1.) Epileptics who do not need hospital care, but for whom systematic and public treatment is desirable.

(2.) Those who need only temporary treatment.

(3.) Those who need hospital care for a long period.

(4.) Children who are the subjects of epilepsy.

Epileptics, when insane, should be treated in ordinary insane asylums. These places are, on the whole, the best adapted to them. Cases which demand temporary hospital care should be provided for in special divisions of general hospitals, and it is to be hoped that such divisions will become numerous. Combined with these there should be well-organized out-patient departments. Cases of long duration demand special buildings or separate divisions in existing public institutions.[3] Epileptic children should be cared for in separate divisions of idiot asylums when young; when older in public institutions for adults.

PROVISION FOR THE INSANE OF BERLIN.[4]

Dr. Schrœter has considered this subject in a recent paper which is of interest in connection with the need of increased accommodation in the city of Berlin.

In 1879 the asylum at Dalldorf, which was to accommodate 1000 insane persons from Berlin, was finished. By the end of 1881 there were 1100 inmates, though 375 of the city's insane had been sent to private asylums. A larger number of inmates at Dalldorf than 1100 does not seem advisable. What then shall be done with the rapidly increasing number of the insane? A few can be taken care of by private families, but this means of provision can be availed of only to a limited extent in comparison with the requirements. Neither can the private asylums be utilized much further than has already been done, as they are not the best places for the care of the city's insane.

The best course would be to erect another asylum, but as public opinion at present is opposed to this, it seems most feasible to establish an insane colony after the fashion of Saxony. The city of Berlin owns a large amount of land, on some of which the plan might be tried for 500 to 600 persons. The cost would be small, as the land is already in possession of the city, and some of the small buildings which are to be found here and there could easily be altered to suit the needs of the patients. Buildings for the officers, cooking, washing, and a small central building, will be all that would be necessary.

Berlin contains about 1,150,000 inhabitants, and insanity increases yearly at about the rate of 200 persons.

---

[1] Annales Medico-Psychologiques.

[2] Archiv für Psychiatrie und Nervenkrankheiten, xiii. Band, 2 Heft.

[3] In Berlin the Charité has an epileptic department with thirty beds. In Paris there are eighty beds for males at the Bicêtre and one hundred and thirty-seven beds for females at Salpetrière. In the Hospice de l'Antigreaille at Lyons there are fifty-six beds.

[4] Allgemeine Zeitschrift f. Psychiatrie, April, 1882. Fürsorge f. die Irren der Stadt Berlin.

MECHANICAL RESTRAINT.[1]

Drs. Bannister and Moyer sent circulars to fifty insane asylums asking a great variety of questions about the use of restraint and seclusion, and twenty of the asylums responded. The circular desired the answers to be founded on statistics gathered during the month succeeding its receival, which was February.

The percentage of sleeping draughts was found to range from nothing to over eleven per cent. of the population. The average daily percentage of patients restrained rose as high as six per cent., and of secluded to three per cent. The average percentage of restraint was one and one half per cent., which was not, in the authors' opinion, too high an average for all the asylums in the country.

It was considered advisable to repeat the comparison of the ratio of suicides between England and America which was made by Dr. Wilbur in 1875. The comparison of these statistics was made for 1880. It was found from the Report of the Commissioners in Lunacy for 1880 that twelve suicides occurred in English public asylums which had a daily average of population of 40,737. Four of these occurred while patients were at home "on trial." Taking the reports of thirty-three American asylums for 1880, with a daily average population of a little over 17,000, twenty cases of suicide were found. According to these figures the ratio of suicides in American asylums has decreased from one in 500 in 1875 to one in 850 in 1880. But in England the ratio has decreased from one in 2000 to one in 3333 during the same period.

It cannot be claimed that this disproportion is entirely due to the non-restraint system in England. The significance of the fact is that the disuse of restraint in England is not accompanied by an increase of the evil for which it is largely employed in America. If this immunity in England from suicides is due at all to non-restraint, it must be from the increased watchfulness and care required when restraint is not employed.

Dr. Schlager,[2] of Vienna, discusses the various forms of padded rooms now in use in insane asylums where non-restraint is used, and, after summing up the disadvantages, describes a form of "padded room" which he himself has used with success for six or seven years. He describes a room 468 centimetres high, 425 long, and 390 wide. In this he builds a frame-work 302 centimetres high, and which is fifty-three centimetres from the walls. Thus it will be seen that the frame-work stands free in the room with sufficient room for a person to walk between it and the wall. It is to be taken for granted, of course, that this frame-work is sufficiently strong. It is four-cornered, and the corner pieces are connected by a heavy hempen webbing, stretched vertically and horizontally, only small spaces being left between the webs. This webbing forms the first layer of the wall or side of the inner space. Inside of the webbing heavy sail-cloth or canvas is stretched which is thoroughly painted. The corner pieces are well padded, the floor is covered with linolium, under which there is plenty of stuffing.

The heat comes from a register in the wall above the top of the frame-work, and light is admitted from a high window. The door to this "sail-cloth seclusion room" is seventy-eight centimetres wide, well padded on the inner side, and opens outward. In the upper third is a little observation window (Beobachtungsfensterchen) of heavy glass. The sail-cloth room is 286 centimetres wide and 251 centimetres long. The sail-cloth walls can be easily cleaned both from the inside and outside.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

OCTOBER 23, 1882. DR. J. C. WARREN presided.

DR. WILLIAM H. BAKER spoke on the subject of

LACERATION OF THE CERVIX UTERI,

and exhibited carefully-prepared colored plates illustrating the various points which he discussed. He first remarked that little that is essentially new had been written on this subject since Dr. Emmet had given its name to the operation which he had instituted for this class of cases.

The reader then mentioned the different forms or classes of cervices in which the accident occurs: First, there is the undeveloped cervix, which is very apt to tear in labor, but the laceration is not so apparent as in the fully developed cervix on account of there not being so much eversion. Next there is the conical cervix, which is likely to cause sterility, but when pregnancy occurs tears more readily than the normal cervix.

Persistent and long-continued cervical disease, and, in fact, any neoplasm in the substance of the cervix evidently tends to laceration, and also where a first pregnancy occurs late in life, a certain amount of atrophy having taken place after the full stage of development has been passed.

Dr. Baker then mentioned the class of labors in which we are to expect laceration. In fully one half of the cases where it has occurred the labor has been a rapid one, and in such labors we are less likely to find symptoms of the accident at first than we are months afterwards. About one quarter of the remaining cases occur in tedious labors, and the rest from an early application of the forceps.

It is important to diagnosticate the lesion early, and to do this successfully a speculum should be used, as a digital examination may fail to detect it.

The reader then stated that there was no symptom or train of symptoms which were characteristic of the lesion. If the tear is extensive there may be considerable hæmorrhage during the labor. The backache, leucorrhœal discharge, etc., are rather results of changes of position of the uterus or are due to a cervicitis than to the injury itself.

In the majority of cases the diagnosis is easily made, but exceptionally it becomes difficult, and can only be detected by means of the tenaculum.

In speaking of the extent of laceration which necessitates operative interference, Dr. Baker dissented from those writers who hold that in first labors laceration must necessarily occur, as he had seen a number of virgin cervices after two or three labors. Generally speaking any laceration allowing eversion to take place necessitates operation. As to preparatory treatment, the first object is to get rid of the inflammation, as cellulitis is apt to accompany these tears, and the time will be well spent in getting rid of this condition before operating, thus differing from Goodell, who believes that the operation tends to cure the cellulitis.

---

[1] On Restraint and Seclusion in American Institutions for the Insane. Journal Nervous and Mental Diseases, July, 1882.

[2] Zeitschrift f. Psychiatrie, Kleinere Mittheilunge, vol. xxxix., Heft. 1 and 2.

If cystic degeneration is present, and the tear is only on one side, we can usually denude deeply enough to remove the cysts, and still have sufficient healthy tissue for the operation. The reader stated that the edges of the tear should be brought together as soon as possible, or before structural changes have occurred, thus aiding involution and avoiding septicæmia, saving the patient also months of suffering.

The operation should be performed from four to seven days after the menstrual period, as an earlier date may cause a recurrence of the flow, and a later one may bring it on too soon, before we have time to remove the sutures. As to the best manner of performing the operation, a want of free denuding often causes failure. All cicatrices and hyperplastic tissue must be removed. The method of operating adopted must vary with the character of the laceration. It is at times extremely difficult to roll back the everted portions, but this is best accomplished by making a V-shaped incision on either side, and there must be no strain on the stitches. A strip of healthy membrane should be left for the canal. It is well to operate under the spray.

Dr. Baker had found that it was better for the patient to remain quietly in bed after the operation for eight days, the stitches to be then removed, and at the end of two weeks the patient could get up.

During this period the patient was to be kept on low diet, milk and toast and tea, and the bowels were to be kept confined for about a week, until the stitches were removed, or just before this procedure. If the perinæum was intact there was no especial reason for using the catheter, but where it was torn, or where the vagina was large, it should be used, at the same time filling the vaginal outlet with a sponge. Douches were also used.

In certain cases of extensive laceration eversion does not occur when the uterus is retroverted. The reader explained the mechanism of this condition, and also that in those cases of incised posterior cervix from an enlarged uterus descending on the floor of the pelvis. He then spoke of the great benefit of the operation in comparison with the treatment by the cautery, and concluded by mentioning the importance of reducing the tendency to epithelioma, which exists in these cases.

Dr. Minot said that he had never seen any bad results in his cases from not keeping the bowels confined, and that he did not use the catheter excepting where the patient required it. He was accustomed to keep the patient in bed for a week. He had frequently detected a laceration by digital examination, and had often been surprised to find on using the speculum that the tear was not so large as he had supposed. The operation probably prevents abortions, which would otherwise take place if the laceration were allowed to remain untouched.

Dr. C. M. Green said that laceration of the cervix often occurred in a class of cases not referred to by the reader, namely, in cases of abortion and premature labor; in these cases the cervix, not having undergone complete preliminary softening, is much less dilatable, and if the delivery is rapid, or the membranes are ruptured early (as would often be the case in criminal abortion), laceration is very likely to ensue.

Dr. Boardman said, "I am gratified to have this subject brought up anew, for I am thoroughly satisfied as to the important relation which this lesion bears to the multifarious affections peculiar to women, and regret to observe the reluctance which physicians continue to show to appreciate its importance, and the benefits to be derived from Emmet's operation.

"Dr. Baker has presented the subject in so attractive and excellent a manner in all its details that there seems to be but little left for any one to say, yet I feel disposed to make a few remarks, partly to confirm some of his observations, and partly to differ with him in some particulars.

"The conditions which may be considered to predispose to this lesion he has enumerated quite thoroughly, but he made no mention of the passage of the shoulders in labor as a factor, and I am inclined to regard it as an important one in the production of this accident. In a paper which I read before one of our societies about one year ago I took occasion to suggest this as a not infrequent cause; and I am able to recall a case where the accident did occur in this way under my personal observation, at least the tear obviously took place after the head had passed safely through the cervix. A study of the ordinary action of the uterus during labor, I think, will give a full appreciation of the *rôle* which the shoulders play in occasioning the lesion.

"With regard to the infantile and the conical cervix, we may readily agree with Dr. Baker that these conditions would predispose to the production of a laceration, for it is easy to understand that, where there is defective development, the integrity of the part may be impaired. This point, however, would be difficult to determine, for, in my experience at least, we rarely have the opportunity to examine such a cervix except in cases of sterility. Yet women who have such a cervix are not always sterile, nor when conception takes place is labor necessarily attended by laceration of the cervix, and I will cite two cases in illustration. One of these I reported formerly to the Obstetrical Society. The patient had been married three years without having children, and consulted me in order to ascertain why she did not conceive. I found an infantile cervix, which was actually flexed posteriorly by means of a fibrous band. This was divided, and the neck kept in good position for a time by tampons. Two or three months later she became pregnant, and I attended her at her confinement at the full term, when the cervix remained intact.

"The other came under my care some time ago, and in the examination I ascertained that she had a conical, so-called, elongated cervix, the os barely admitting the bulb extremity of a large flexible sound. She had been confined at the full term, and yet there was not the slightest evidence of the fact to be gained from the appearance of the neck. This case will serve, also, to confirm the statement, made by Dr. Baker, that labor does not necessarily leave its traces in the form of some degree of laceration of the cervix.

"As to the diagnosis of this condition I quite agree with the reader that it is not always an easy matter to make out the existence of a laceration unless one examines in the proper manner, that is to say, with a Sims' speculum and two tenacula, and I am convinced it is because most physicians neglect to employ these that they fail to recognize the lesion. I have quite recently performed the operation upon a patient from a neighboring State. Several physicians in the city where she resides had seen her, and all advised her not to submit to the operation. I think *all* of them told her that the cervix was not torn; at all events, one of them, who is said to have given especial attention to gynæcology for thirty or more years, assured her that her cervix uteri was as perfect in form and appearance as that of a virgin. While his enthusiasm may have led him to employ extravagant language, yet I can readily conceive that he deceived himself, for, in this case, a cylindrical or bivalve speculum served to obliterate the grooves of the lacerations, and the eye would see only a smooth, rounded cervix, though considerably larger than one should find when no disease is present. I would merely add that this 'virginal' cervix was torn on both sides, and required seven sutures. I cannot agree with the reader when he advises that the operation should be done immediately after labor, whenever it is recognized at that time, for we know that some, at least, of them heal spontaneously; and I have seen many cases which show that even with an extensive tear there may be no evil results, for a long period at any rate, not until the uterus becomes prolapsed sufficiently to allow the lips to come into constant friction with the floor of the vagina, or to be forced apart by traction upon them occasioned by a prolapsed and retroverted uterus. Having had many such cases under observation I cannot understand the result which Dr. Baker states ensued in one of his cases, where eversion did not take place until after he had replaced and properly supported with a well adapted pessary a prolapsed uterus. On the contrary, I would repeat, that my observation has taught me that so long as the uterus maintains its proper position eversion will not ensue, no matter how extensive the lacerations may be.

"The reader also states that he has had bad union resulting from operations done within two or three days of the menstrual period. If he admits that the menstrual fluid will interfere with the union of the flaps, I think he must allow that the lochial discharge would offer a still greater obstacle to the union of the parts by first intention, and, upon this ground alone, I should not advise the immediate operation. My practice is to wait until the commencement of symptoms which may fairly be ascribed to the lesion, and then to urge the necessity of the operation for the purpose of relieving present, and to avoid inevitable future, suffering.

"In the use of spray in these cases I have had no experience, having never considered it necessary, though I can fully appreciate that it may be required in hospitals. My custom is to assure myself that no clots are allowed to remain between the flaps, to give a copious hot douche after the completion of the operation, and, finally, to pack the upper vagina, around the cervix, with absorbent cotton dipped in a solution of thymol. This packing serves to support the uterus as well as a disinfectant, and it is removed on the second or third day, when hot douches are given twice or thrice daily. By these means the swelling is kept down and reduced, the vagina is thoroughly cleansed, and danger from the contact of urine is avoided, so that I never employ the catheter, unless, of course, there is some exceptional indication for its use. The bowels, having been freely emptied before the operation, are made to act every two or three days afterwards by means of enemata or laxatives."

DR. WARREN said that the operation was not a trivial one, and that at times alarming symptoms occurred.

DR. GOSS mentioned a case in which there was quite extensive bilateral laceration successfully operated upon by Dr. Baker. Two years later the patient was confined prematurely at about the seventh month. A slight tearing in the cicatrix on the right side resulted.

DR. F H. DAVENPORT said that he also had had an opportunity of observing a case of confinement subsequent to this operation. The patient had been operated on for bilateral laceration, with complete union. She very soon became pregnant, and at full term had a rapid labor, so rapid that the child was born before Dr. Davenport arrived. In spite of the quick labor, however, there was no laceration, as was shown by an examination six weeks later with the speculum.

DR. SABINE said, in regard to operating immediately after confinement, is it possible to discover the lacerations at that time? It seems to me not. Besides, is it not fair to suppose that a large proportion of them heal spontaneously, or at least heal so far as to become of slight importance. The reader spoke of operating at this time to diminish the susceptibility to septicæmia. Would not meddling with the uterus just at this time, when the woman requires to be let alone, rather increase than diminish this?

DR. DOE referred to the effects of subsequent pregnancies in cases where this operation had been performed, saying that Dr. Hunter, President of the New York Obstetrical Society in 1881, had attended, up to that time, three such cases, in each of which no rupture had occurred, and he thought there was no more liability to this accident in subsequent pregnancies than originally. Dr. Wylie has also reported three cases, Drs. Mundé and Mann two each, Drs. Peaslee, Watts, and Mackenzie one each, all remaining intact.

Dr. Van de Warker, on the contrary, reports four cases, in all of which the laceration recurred. Dr. Goodell also reports four cases, in three of which no laceration followed, but in the fourth a slight tear took place, but not sufficient to require any operative interference.

Dr. Doe said that he had attended three cases, all of which had been operated upon by Dr. Baker. In the first two cases the rupture had been on the left side, and dilatation took place readily, the cicatrix softening equally with the remaining portion of the cervix. The third case was one of bilateral laceration, that on the left side being very irregular and deep. This case was seen soon after labor began. The os was soft, dilatable, and admitted one finger. The cicatrices on each side were distinctly felt. Two hours later the os was two thirds dilated, both cicatrices were thinner than the remaining portion of the cervix, that on the left side taking on a triangular shape, with the apex towards the vaginal junction; the anterior lip was slightly œdematous, and later became much more so and wedged in between the head and brim during the pains, so that it was necessary to push it up above the head. The cicatricial portions had become very thin.

In all of these cases the cervix remained intact up to the time when it receded over the head, yet in the first case there was a repetition of the laceration, though very slight, and also on the left side in the third case, though not so extensive as to require a renewal of the operation.

It would seem as if the rupture in these cases must have been caused by the passage of the shoulders, inasmuch as the cervix seemed entire at the time when the largest diameter of the head passed through.

Dr. Doe added that he had recently attended a lady in her second confinement at the seventh month, where there was a thick, deep cicatrix which had naturally resulted from an extensive laceration produced by version in her first confinement at full term. Throughout the labor there was no softening or any tendency to dilatation of the cicatricial portion, and a repetition of the rupture took place, though not so extensive as originally.

THE AMERICAN ACADEMY OF MEDICINE.

The seventh annual meeting of the Academy of Medicine was held in Philadelphia October 26th and 27th, at the hall of the College of Physicians, the use of which had been tendered for the occasion, the first session commencing at three o'clock Thursday afternoon, and the second at nine on Friday morning, adjournment occurring at noon.

Dr. Traill Green, of Easton, Pa., President of the Academy, occupied the chair, and on Thursday evening delivered his annual address, which was well received by a large audience. He discussed the objects sought after in the establishment of this organization, reviewed its progress, and indicated some of the changes in medical education which had been brought about since it was founded; in conclusion he read a number of laudatory expressions of opinion from many prominent American physicians upon the Academy of Medicine and its work.

FIRST DAY.

At the first session an election for members resulted in the addition of fifty-one new names to the list. A very interesting historical sketch by Dr. Benjamin Lee, of Philadelphia, was read, entitled the Advantages of a Liberal Education Preliminary to the Study of Medicine as illustrated in the Early History of Medicine in the Commonwealth of Pennsylvania, which was received with evident appreciation. The secretary, Dr. R. J. Dunglison, in the absence of the author, read a communication by Dr. Elisha Harris, of New York, On the Public Health Service in its Relations to thorough Preparation of the Physician, which with the preceding was ordered to be published.

The **Secretary** read biographical notices of deceased Fellows of the Academy, Dr. H. Lenox Hodge, James A. Shearer, and Dr. Allan, the late President of Girard College.

Dr. H. O. Marcy, of Boston, Mass., read a paper on the Antiseptic Treatment of Operation Wounds, and **Dr. L. H. Steiner**, of Frederick, Md., read a Reply to a Recent Criticism of the College by a College Professor, which were also ordered for publication.

Dr. Geo. M. Beard read an abstract of his essay on the Medical Profession and Medical Education in Europe, which is shortly to appear in book form.

In the evening, after the delivery of the annual address by the president, a social entertainment was given by the resident members, which was not enjoyed the less because of being an innovation, it not having been the custom of the Academy to have social meetings.

SECOND DAY.

After the reading of the treasurer's report the Nominating Committee appointed yesterday presented the following list of officers for the ensuing year: —

H. O. Marcy, of Boston, Mass., for President. Drs. Geo. M. Beard, of New York, Wm. Elmer, of Bridgton, N. J., Cornelius R. Agnew, of New York, Thomas M. Drysdale, of Philadelphia, Vice-Presidents; and Dr. Richard J. Dunglison, of Philadelphia, for Secretary and Treasurer. Dr. Chas. M. McIntyre, of Easton, Pa., for Assistant Secretary.

The report was adopted, and the nominees declared unanimously elected.

Drs. Austin Flint, of New York, and Henry F. Campbell, of Augusta, Georgia, were elected honorary Fellows.

It was decided to hold the next meeting in New York city, on the third Tuesday of September, 1883.

The receipt of letters from the surgeons in attendance upon the late President Garfield was announced by the secretary, in response to resolutions adopted at the last meeting of the Academy.

A paper by Dr. Nathaniel Allen on The Influence of Medical Men was read by the **Secretary**, and ordered to be published.

The report of Drs. Dunglison and Marcy, Committee on Medical Legislation, was read and adopted, the Committee being continued until next year.

On motion it was resolved that an annual collation be given hereafter at the annual meetings.

Dr. Chas. McIntyre read a communication on The Academy and the Profession, which was accompanied by tables showing the number of men with college training in various medical societies, and also the very small proportion of graduates of classical institutions which adopts the practice of medicine as compared with the other professions of law and theology. The preponderance of A. B.'s in the Medical Department of Harvard University in comparison with other medical schools was very marked. From the professional schools in 1879 *medicine* reported 9522, with a percentage of 8.2 of those having a degree in arts and science; in 1880, 9876, with only 7.9 per cent. *Theology*, in 1879, 4362, with 30.6 per cent.; in 1880, 5093, with 26.4 per cent. *Law*, in 1879, 3018, with 25.2 per cent., and 1880, 3134, with 24.1 per cent. of those who had a classical degree.

Permission was given the author to publish the preceding valuable paper in some literary or scientific journal.

Dr. Benjamin Lee, of Philadelphia, and Dr. L. D. Bulkely, of New York, were elected members of the Council. The new officers being inducted to their positions, after the passage of a vote of thanks to the College of Physicians for the use of the hall, and to the resident Fellows for attentions received, the Academy adjourned. F. W.

— A circular from the Secretary of the National Board of Health has been brought to our attention, complaining of the position in which the Board has been placed, and calling upon the members of the Public Health Association for vindication of its course, and for help in reasserting the position which it has lost partly, at least, by its own faults, — an undignified proceeding, and not calculated to increase public respect for the Board.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

E. B. NANCREDE, RECORDER.

THURSDAY evening, October 26, 1882. The president, DR. JAMES TYSON, in the chair.

HYPERTROPHY OF THE PROSTATE GLAND ACCOMPANIED BY PROFUSE AND FATAL HÆMORRHAGE.

Presented by DR. J. B. ROBERTS for Drs. J. M. Adler and Wm. Hunt.

The clinical history furnished by Dr. Adler is as follows: —

The patient, aged sixty-six years, of medium size, weighing one hundred and fifty pounds, of regular habits, had enjoyed good health until within one year past. On a number of occasions during the past year he has had slight hæmaturia. He passed his urine with ease, and only complained of slight perineal pain. On 12th of September last he arose in the morning in his usual health, but soon after breakfast he was attacked with sudden acute pain in the bladder, which he was unable to empty. Dr. Adler saw him in a short time, when the patient complained of great hypogastric pain, and was much prostrated, with a blanched, sallow, cold skin, and a rapid and feeble pulse. A well defined pyriform swelling occupied the hypogastric region, extending upwards to the umbilicus. After stimulants and morphia had been given about one pint of fluid blood was drawn off by the catheter, after which, this instrument becoming blocked, a double one was introduced by means of which injections of warm water were thrown into the bladder, and another pint of broken-down coagula was removed. A solution of alum, twenty grains to the pint, was then introduced into the bladder, and allowed to remain. Despite the internal use of ol. terebinth and ol. erigeron, with opium suppositories, the hæmorrhage continued, necessitating recourse to the catheter injections, etc., to free the bladder from coagula. Death ensued on the sixth day from exhaustion induced by the repeated hæmorrhages. The diagnosis arrived at by Drs. Hunt and Adler was carcinoma of the neck of the bladder.

Sectio cadaveris. The autopsy was a partial one, made in the undertakers establishment. Upon incising the hypogastrium the distended bladder was at once seen containing nearly a pint of clotted blood. This was removed by the hand through an opening in the viscus, when Dr. Roberts felt near the vesical neck, protruding into its interior, a pear-shaped mass about the size and shape of the adult uterus. This, as the members of the Society saw, was evidently a greatly enlarged middle lobe of the prostate gland covered by unaltered mucous membrane. The lateral lobes were also enlarged. The mucous lining of the viscus was smooth and congested, presenting at one point two small circular depressions, with cleanly cut edges. Owing to circumstances no further examination of the body was made.

DR. ESKRIDGE inquired whether the blood removed from the bladder at the autopsy presented a urinous odor? He had treated recently an interesting case of recurring hæmaturia, supposed to be due to a varicose condition of the veins of the vesical neck. The patient was a man aged seventy-seven years, who five years ago, and at intervals since, had lost considerable blood. The former attacks had yielded readily to ergot, but shortly after the onset of the last one Dr. Eskridge had found the bladder distended with a large clot which he had been unable to break down by injections of either alkaline or acid solutions. The secretion of urine was suppressed during the last twenty-four hours of the patient's illness, the blood drawn from the bladder presenting no characteristic odor. The man died apparently from uræmia, two or more severe chills preceding death, although no convulsions occurred, and he remained conscious to the last. Unfortunately no post-mortem examination was obtained.

DR. FORMAD thought that the growth resembled rather a sarcoma than a carcinoma. He had seen two instances of round-celled sarcoma of the prostate. All growths starting from the epithelia of the genito-urinary tract, as well as from the cavity of the uterus, the kidneys, and supra-renal bodies, in short growths of all the organs arising from the middle layer of the blastoderm, macroscopically resemble sarcoma, and usually prove to be such when microscopically examined.

DR. TYSON said that this specimen possessed a special interest for him, inasmuch as he had had his attention forcibly directed to the differential diagnosis of a simple hypertrophy of the prostate from malignant disease of that organ, by having lately under his care a gentleman where ergot at first proved of much benefit, but in whose case the catheter was soon demanded. This instrument was used with unusual skill and gentleness by the patient himself, notwithstanding which blood occasionally followed its use. Exceedingly severe pains next developed, radiating from the bladder to the testicles, groins, and inner aspects of the thighs. Emaciation soon set in, and he died at the end of fifteen months. At the autopsy malignant disease of the prostate was found, involving by infiltration the lateral aspects of the bladder and the neighboring parts, so as to compress the nerves, thus accounting for the radiating pains complained of. He would like to know from Dr. Roberts whether his case presented this symptom of radiating pains, and also the source of the hæmorrhage, as the smooth surface of the growth and the healthy condition of the mucous membrane of the bladder are such as to excite surprise.

DR. ROBERTS, in reply to the various questions propounded, said that only having made the post-mortem examination he knew nothing beyond the facts given in the notes read. As to the source of hæmorrhage he would call attention to the two small erosions of the mucous membrane of the bladder as the probable source.

Report of the Committee on Morbid Growths. The specimen presented by Dr. Roberts, upon microscopic examination, is found to consist of the histological elements composing the prostate gland. There is no evidence of any neoplasm except a numerical hypertrophy of the structures of the organ. The specimen is a hypertrophied prostate gland.

CASEOUS DEGENERATION OF THE KIDNEYS.

Presented by DR. J. B. ROBERTS for Dr. Dunmire.

Owing to Dr. Dunmire not having seen the woman until within a few hours of death, the history is of necessity imperfect. She was a married woman, thirty-nine years old, whose husband is said to have infected her with some form of venereal disease. The husband had been dead for about one year when the patient first came under treatment. There were no evidences of syphilis, so that the supposed venereal affection of the past had been presumably gonorrhœa. When seen September 14, 1882, was exceedingly ill, gave a history of general ill health for the past few years, but dated the present trouble some weeks back when she had bathed in the surf while menstruating. This was followed by a chill, since when she had steadily grown worse. When Dr. Dunmire saw her, she complained of sore throat, difficult deglutition, anorexia, sick stomach, pain in the back, with sharp pain running towards the groin, especially on the right side, tenderness over the abdomen, and frequent scanty micturition. The pulse was 140, the temperature 103° F., and there was profuse leucorrhœa. An unfavorable prognosis was given, which was soon verified by her becoming unconscious, and dying six hours later.

Autopsy. The abdomen alone was allowed to be examined. All organs healthy except kidneys and bladder. The latter contained a little urine and mucus, its walls were much thickened, and its lining membrane was congested. The left kidney had little true kidney structure left, but was converted into a group of seven or eight cysts, containing a white cheesy material of a moderately firm consistence. The ureter was much dilated and thickened for about three inches from the pelvis of the kidney. The right kidney was normal in outline, but when incised revealed one large cyst with creamy contents, and also another small cavity containing a few minute calculi. Several of these could be felt through the walls of the normal ureter, thus accounting for the ante-mortem renal colic. The perinephritic structures were unchanged, as well as the capsules of the kidneys, although these latter were perhaps more adherent than normal.

LYMPHOMATOUS TUMOR OF MEDIASTINUM.

Exhibited by Dr. W. S. Little for Dr. G. C. Smith, of Rondout, N. Y.

The history of the patient from whom these specimens were removed is, in brief, as follows: A young man, aged twenty-four years, had been but a few days under Dr. Smith's care, having come from Boston, where his physician had pronounced him phthisical, and had recommended a sea voyage. During the past few months small nodular masses had developed in the muscular tissue of the right chest walls near the median line in front, and also posteriorly. The axillary and supra-clavicular glands were involved. Shortly after Dr. Smith first saw him he developed marked dyspnœa, and died suddenly without any evidences of marked lung disease, except, perhaps, some symptoms of pleuritis. There was apparently mitral disease. Anasarca, especially of the lower extremities, gradually developed.

Sectio cadaveris. The skin was hard and friable; nodular masses were found disseminated through the muscular tissue of the chest walls, which had undergone some species of degeneration; the costal cartilages presented evidences of a degeneration similar to that seen in the muscles. On removing the sternum the subjacent tissues were markedly pigmented, and the anterior mediastinum completely obliterated by a mass of the size and shape of the half of a large lemon, which pressed against the heart. The large bronchi were involved in the growth, otherwise the lungs seemed healthy, and evidences of slight pleurisy were found. The pneumogastric nerves were both involved, chiefly the left, and on further dissection the disease was found to occupy all of the lower part of the posterior mediastinum, involving the contiguous osseous tissues. The nerve involvement explains the sudden death. The diaphragm was also involved in the lower portion of the growth. The four portions of the growths shown to the Society are, first, one of the subcutaneous nodules; second, a small portion of left lung near its root; third, a portion of the anterior mediastinal growth with part of trachea, bronchi, and aorta; fourth, one quarter of the tumor which, involving the diaphragm, projected from the left thoracic wall into the chest cavity.

Dr. Formad inquired whether there were any other evidences of cancer in the remainder of the body.

Dr. Little replied that none were detected.

Dr. Formad then said that he was unaware of any specimen of primary carcinoma of the mediastinum on record, and moved the reference of the specimen to the Committee on Morbid Growths, as it was probably a sarcoma.

"*Report of the Committee on Morbid Growths.* — The mediastinal growths are found on microscopical examination to consist of a mass of hypertrophic lymphatic glands much pigmented. There are also seen adipose and fibrous tissues in a state of active proliferation."

CIRRHOSIS OF LIVER IN THE STAGE OF ENLARGEMENT.

Exhibited by E. T. Bruen.

W., aged twenty years, colored, has worked on a farm since boyhood, and been much exposed to weather. His habits were temperate; he was free from either syphilitic or malarial taint. Father is still alive, mother died of phthisis. He was never robust, but had had only one severe illness, namely, typhoid fever, from which he convalesced perfectly, but he readily "took cold." He was first seen by Dr. Bruen at the University Hospital, in January, 1882, when he gave the following history: Abdomen began to swell two years ago with neither pain nor tenderness. Was obliged to rise at night to urinate. The abdominal swelling increased, and the previously regular bowels became constipated. Occasional sharp, shooting pains were felt across the chest when lifting weights, or working hard, and also slight, dull pain over liver, lasting for a few moments only. When seen, abdomen measured fifty inches. On 19th January he was tapped, nineteen quarts of fluid being removed, rendering plain a much enlarged liver, covered with smooth nodular elevations, with the apex beat of the heart displaced upwards into fourth interspace. March 18th five gallons more fluid were removed, after which pleural and bronchial complications arose, which soon subsided. May 6th paracentesis by capillary needle was resorted to, which was followed by much localized tenderness around the site of the puncture. Symptoms of peritonitis developed next day, which terminated life the same evening. During life the diagnosis was most difficult and interesting. The enormous size of the liver, the palpable vasselation of its surface giving a sensation like that of crepitating tissue, as though fluid lymph had been thrown out, and finally his abstemious habits, with absence of either syphilitic or malarial taint, suggested malignant disease. His age, the excessive rarity of primary carcinoma or sarcoma of the liver, with his family history, all negatived this view. He had had some dyspepsia. Enlargement of the liver connected with catarrh of the bile ducts would have presented symptoms of jaundice, and intermitting temperature, terminating by death from cholesteremia. The case, then, was one of simple cirrhosis.

Sectio-cadaveris. The abdomen contained six gallons of purulent fluid. Both the parietal and visceral peritonæum were covered with a thick coating of inflammatory lymph, tinged with blood, from multiple capillary hæmorrhages. The abdominal veins were all replete with blood. The liver weighed nearly five and one half pounds, was of a nutmeg appearance, on section was indurated, and presented a vasselated nodular appearance. The gall-bladder was thickened and contracted about two thirds in bulk. The bile ducts were normal. The spleen was covered by a pseudo-cartilaginous capsule, but was otherwise normal, as were also the stomach, pancreas, intestines, kidneys, and supra-renal bodies. The abdominal lymphatic glands were slightly enlarged.

DR. SEILER remarked that, having seen the case during life, it was almost impossible to divest one's self of the idea of malignant disease. He thought that the projections were the unaltered portions of the liver, which had been impressed and squeezed out by the contracting interstitial tissue.

DR. BRUEN remarked upon the obscurity of the ætiology.

DR. TYSON asked Dr. Formad, who had examined the specimen microscopically, whether he considered it to be in the first or second stage of the affection.

DR. FORMAD replied that he considered it to be in the commencing second stage, and detailed the microscopical appearances.

DR. TYSON, after briefly adverting to the causation of cirrhosis, said that his reason for asking Dr. Formad whether he considered that the organ was in the first or second stage of cirrhosis was that some few years since an important insurance case had been argued in our courts, where the defense was set up that the man had not a cirrhosed liver because it was enlarged. For his part he had no doubt that a liver could be in the second stage of cirrhosis and yet be enlarged; there might be enlargement from fatty infiltration concurrent with interstitial inflammation.

— There has been a great improvement in the sanitary condition of new buildings of all classes in New York since the Board of Health was given control of the plumbing business. Experience has shown that the cupidity of unscrupulous plumbers is at least as often to blame as their ignorance. A case is given wherein a plumber was paid in 1878 to remodel the plumbing of a first-class house, and he reported having put it in the best condition. During the next three years sewer gas was repeatedly noticed, and the plumber was requested to put in a fresh-air pipe in his main trap. He objected, and another plumber was employed, when it was discovered that there was no main trap, and the house had been utterly unprotected against sewer gas. The main pipe, too, was found to be in a very defective state. The first plumber was sued, and cast in substantial damages.

— The public charitable hospitals of the city of New York contain a total of 5108 beds, the largest being the Emigrant Hospital with 1200 beds, and Charity Hospital coming next with 970 beds. The various private hospitals have a capacity of 2302, and the lunatic hospitals of about 3000.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 9, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE NATIONAL BOARD OF HEALTH AND THE AMERICAN PUBLIC HEALTH ASSOCIATION.

AT the recent meeting of the American Public Health Association a delegation of the National Board of Health made to the Association a report recapitulating the influences hostile to it as follows:—

"(1.) The State Board of Health of Louisiana, backed by a portion of the press of New Orleans, in its repeated allegations that the National Board of Health has interfered with and obstructed the local authorities, instead of aiding them, as required by law. The interference consists in the National Board establishing an inspection service within the limits of New Orleans, being induced to take this action in compliance with the request of the health authorities of the Mississippi Valley States, including those of Louisiana itself. Nothing short of this will satisfy other communities having intercourse with that city, which would certainly be quarantined by its neighbors to a most inconvenient extent if it were not for the protection it derives from the certificates of the inspecting agents of the National Board.

"(2.) The powerful influence of the Treasury Department, which asserts a claim to the disbursement of all funds appropriated by Congress for the suppression of epidemics, and to the selection of its own medical officer, the chief of the Marine Hospital Service, as its agent in these operations, although an express provision of an existing Act of Congress repeals all previous acts conferring sanitary powers on that branch of the public service, and clothes the National Board of Health, which includes in its membership a detailed officer of that service, with all the power assumed by the general government in respect to quarantine and sanitary matters.

"(3.) As composed of medical men selected without regard to party affiliations, and wielding no political patronage, the Board finds no hearty support from politicians of either of the great parties of the country.

"In conclusion, we desire to say that, as the present membership of the Board was largely due to the unsolicited choice of the advisory committee of the Public Health Association, we abide its decision as to our longer continuance in these positions, preferring, if deemed consistent with the public good, to be relieved by the selection of others, who may, perhaps, command a larger share of public support."

We have called attention, in these columns, more than once to the value of the scientific work done by the Board, and we regret exceedingly that the appropriations have been so cut down as to make it necessary to abandon various important investigations already begun. With the rest of the medical press of the country we have appreciated the difficulties under which the Board has been laboring, and we have often withheld obvious criticism. But it is a question whether that course has not been pursued too long for the sake of the Board itself as well as in the interest of sanitary science and a permanent national health organization.

It certainly is true that the action of the Board in Louisiana has been in some of its features extremely unwise. It is not fair to intimate that personal motives, and not the efficiency of the quarantine service, governed those who have placed the money for the control of yellow fever in the hands of the Marine Hospital Service. At the expiration of the present quarantine law there is not a chance that it will be reenacted, and general dissatisfaction, rather than politics, has been at the bottom of the failure to support the National Board of Health on the part of Congress, the executive and the treasury officials. This dissatisfaction, too, has become somewhat general in the medical profession, and in health boards, at least in this part of the country.

We are, therefore, very much misled, or else the resolutions of support presented by Dr. Azel Ames, the Secretary of the Public Health Association, and prepared by the executive committee, do not fully represent the general feeling of the country. It is our opinion that the organization of the Board must still undergo very great change before it will be acceptable enough to be perpetuated. It certainly was an avoiding of responsibility, if nothing more, for members of the National Board of Health to refer to the American Public Health Association the question of resigning their places or of keeping them.

◆

MODIFICATIONS IN THE CALIBRE OF VESSELS IN THE STUMPS OF AMPUTATED LIMBS.

AN interesting study of the modifications of blood-vessels after amputations is the subject of a paper by Paul Segond, *Prosecteur de la Faculté*, in the August and September numbers of the *Revue de Chirurgie*. His studies were suggested by the work of Professor Verneuil on the same subject, and were carried on by comparisons of the vessels of the stump with the corresponding vessels of the opposite or unmutilated limb. Injections were made, for the arms, from the arch of the aorta, for the lower limbs from the abdominal aorta. The studies themselves are too extended for a full account. We can concern ourselves in this brief notice only with the conclusions of the author drawn from his own work and such studies and observations of others as tend to throw any light upon the subject. The observations were made upon the dead bodies of individuals who had been subjected to operations of very different extent, from the partial amputation of the foot or hand to the removal of the upper arm or of the thigh. In all cases a notable diminution in the calibre of both arteries and veins was found, even when the part removed represented but a small portion of the limb. The diminution was not confined to the immediate vicinity of the operation, but included the vessels of the whole limb, and extended, in an amputation of the fore-arm, to the subclavian, and in an amputation of the leg to the iliacs. This diminution was found in every case submitted to careful comparative examination. The small number of vessels to be tied in a reamputation of an old stump is adduced as a clinical fact which confirms the result of the dissections, and observations are quoted which show the temperature of the amputated limb to be markedly below that of the corresponding member.

The observations were made on limbs after the lapse of very varying periods of time after amputations, and the diminution is shown to be a very early phenomenon too early to be considered an effect of the atrophy of the soft parts of the stump. In fact the diminution in the size of the blood-vessels probably plays an important pathogenic *rôle* in the atrophy of the limb. Direct experiment upon a dog showed that two months after the amputation of the thigh the gluteal muscles of the two sides were of equal weight, while the iliac and femoral arteries of the amputated limb were markedly smaller than those of the other.

One of the most interesting of the dissections was made in a case of amputation of the left fore-arm. The muscles of the shoulder of the amputated arm weighed three hundred and sixteen grammes less than the corresponding muscles of the other side. The skeleton also presented well marked modifications. The two clavicles were alike in dimensions, but the right weighed four grammes more than the left. These figures have only a relative significance, however, as the bones of the right arm weigh normally, in right-handed persons, more than the left. The proportion of compact and spongy tissue was not the same in the two sides — there was in the left clavicle a marked diminution in the compact tissue. In the same patient the scapula of the left side was twelve grammes lighter than that of the right. The axillary artery was diminished by one fifth ; the radial at its origin had lost nearly one half of its diameter. The difference is always spoken of as a loss on the part of the amputated limb; the question very naturally arises how large a proportion of the difference is due to increase on the part of the limb which is obliged to do an increase of work because of the mutilation of its fellow.

◆

THE CORPORATION WILL CONSULT THE MEDICAL FACULTY IN LEGISLATING FOR THE MEDICAL DEPARTMENT OF HARVARD UNIVERSITY.

IN the course of an editorial last April upon the discussion of the question of admitting women to Harvard University we mentioned that, as a result of a protest then made by the Medical Faculty, a certain degree of direct interest in the management and regulation of the School under its instruction had been formally accorded the Faculty by the passage of a vote on the part of the Corporation, that no matters relating to medical education should be acted on in the future until the Faculty should have had a full hearing upon the subject at issue.

The text of this vote has just been made public among the official records of the Corporation in the *University Bulletin* for October, and reads as follows: —

Voted, that a standing committee of two members of this Board be appointed with whom the Medical Faculty may confer on any matters relating to medical education in the University.

The President appointed Messrs. Parkman and Agassiz as this committee.

Voted, that the president and Fellows deem it inexpedient to legislate in matters relating to medical education in the University without first offering to the Medical Faculty an opportunity of expressing its views.

Such an arrangement as that provided for in the above votes for consultation between those governing and those engaged in administering a very important and considerable department of the University certainly seems eminently proper and necessary.

◆

PHYSICIANS INTERESTED IN THE BOSTON WATER-COMMISSION.

It is known to some of our readers that a Commission was appointed some weeks ago by the Mayor of Boston to investigate the causes of the present condition of the city's water supply, and suggest, if possible, some practical means for improving it.

Comparatively little interest seems to have been shown so far, we are sorry to say, either in the appointment or in the hearings of the commission, except as far as the hearings are concerned, by the Water Board itself, whose attendance thereat is pretty constant. It would be a mistake to suppose that this represents a lack of interest in the question under consideration or of desire for a purer drinking water on the part of inhabitants of the city, though such an inference would, perhaps, not be unfair. We believe it indicates rather a feeling on the part of the public that the Commission is not likely in any case to do anything, a feeling readily reciprocated by the members of the Commission with the impression that the public does not care to have anything done. An apparent indifference on the one side begetting a real indifference on the other, the result will be nothing at present, and an increased difficulty in the way of accomplishing anything in the future; for an absence of recommendation of action of some kind on the part of the Commission is equivalent to a confession that nothing can be done to ameliorate the present very uncertain, and, at times, really unfortunate position of the tax-payers and water-takers of Boston. For this reason we are glad to note that the Boston Society for Medical Observation passed at its last meeting the following vote: —

> The members of the Boston Society for Medical Observation, believing that the water supplied the inhabitants of the city of Boston falls far short of what a potable water should be, and that its condition ought to excite apprehension as it has already excited disgust, desire to express their gratification at the appointment of a Commission to investigate the subject, and to express to the gentlemen of the Commission the deep interest with which their deliberations are watched by physicians. They feel confident that in their consideration of the subject the Commission will recognize the gravity of the evil to be remedied, and hope that with the assistance of such experts as they may consult some remedy may be found for the unfortunate condition of affairs which has led to their appointment.

A copy of this vote was forwarded to the Water Commission. In the discussion of the resolution which followed its proposal a full appreciation of the difficulties attending the problem of supplying the city with a sufficiency of good water was shown, but it seemed to be the unanimous sentiment of the physicians present that mistakes had been committed in the past, and that more might be done than had yet been attempted to provide for the future.

The public doubtless has drunk up a good deal of the fermenting refuse contained in the new basins, and the amount of sewage entering Lake Cochituate is very likely inappreciable, but we should be glad, if possible, to be spared the rest of the dose, and to have suitable legal protection against the pollution of sources of water supply by sewage even in moderate quantities.

Some may think the problems of fermenting banks and beds of algæ and of spongillæ best solved by the expert aid of a civil engineer, and others that most is to be hoped for from a continued chemical and microscopical examination of the waters in question. That is for the Commission to decide, and they must also determine what is to be done to check the enormous waste.

At this present writing the drinking water of Boston is tolerably good; it has been execrable, and may very probably again be of a quality to excite apprehension, not necessarily of actual disease, but of great inconvenience and annoyance.

◆

MEDICAL NOTES.

— Dr. George Johnson, F. R. S., of London, is now using picric acid for the detection of albumen in the urine. This test was suggested to him by his son, Mr. G. Stillingfleet Johnson, who has long labored at chemical research, and believes that the test is free from fallacy. A saturate solution of picric acid has a specific gravity of 1003, and immediately coagulates any trace of albumen which may be present in the urine to which it is added. The delicacy of the test is strikingly demonstrated when slightly albuminous urine is poured on to the surface of nitric acid and the picric acid solution is added on the surface of the urine. An obvious advantage of the test is that the powdered picric acid may be so conveniently and safely carried in the pocket ready for the immediate and efficient examination of any urine suspected of being albuminous. It is only necessary to throw some of the powder into the suspected urine while it is warm, and to agitate slightly, in order to produce an obvious cloudiness if any albumen be present.

— Copies of the Registration Report of the State of Massachusetts for the current year can be obtained by application to the Secretary of State's Office, inclosing postage for eight cents.

NEW YORK.

— A terrible tragedy has occurred in the family of Dr. E. C. Seguin, the well-known specialist in diseases of the nervous system. In his absence his wife took their three children, aged respectively six, five, and four years, up to an unoccupied room at the top of the house, and having blindfolded them and tied their hands behind their backs, deliberately shot them all; after which she took her own life in the same way. Strangely enough, the pistol shots were not noticed by any one in the house or in the neighborhood, and when the bodies were discovered life had probably been extinct for an hour or more. Mrs. Seguin was a sister of Dr. Seguin's junior partner, Dr. R. W. Amidon, and was thirty-two years of age. She had for some time been subject to temporary depression of spirits, for which there was no assignable cause; but, so far as can be learned, there was never before any reason to suspect the presence of actual insanity. The coroner's jury in this case, which was composed entirely of medical men, and of which Dr. Frank P. Kinnicutt was foreman, rendered a verdict to the effect that she killed her three children and herself during a fit of mental aberration; and there can be no doubt that she was suffering from acute melancholia at the time. For several days before the sad event she was much depressed, and it had been the intention of Dr. Seguin to take her the day following on a little trip for the change of scene. At the meeting of the Academy of Medicine held November 2d, a resolution was adopted which directed the appointing of a special committee to express the sympathy of the Fellows of the Academy to Dr. Seguin in this frightful calamity. It is understood that Dr. Seguin will sail for Europe in a few days.

— The commencement exercises of the Brooklyn Training School for Nurses, of which the wife of Mayor Low is president, were held November 2d in the lecture-room of the City Hospital. The mayor presided, and the address to the graduates, who were four in number, was made by Dr. J. C. Hutchinson.

— The reception given by Dr. J. Marion Sims and his son, Dr. Harry Marion Sims, in honor of the venerable Prof. S. D. Gross, of Philadelphia, was one of the most elegant and delightful affairs of the kind ever held in the city. It took place in the magnificent new ball-room of the Hotel Brunswick, along one entire side of which was spread a table loaded with all sorts of good cheer, and in the balcony Lander's orchestra played during the evening. The guests numbered three or four hundred, embracing the prominent medical men and a few distinguished laymen of New York, and no less than fifty representatives of the profession from Philadelphia, among whom were Drs. Samuel Gross, Jr., Agnew, Pancoast, John L. Atlee, Levis, Horatio C. Wood, Hewson, Hunt, Thomas, Nancrede, Longstreth, and I. Minis Hays. There were also present Drs. Busey and Lincoln, of Washington; Drs. James G. and William H. Bailey, of Albany; Dr. Daley, of Pittsburg; Dr. D. B. Brown, of Baltimore; Dr. B. A. Clements, U. S. A.; Mr. Alfred McKellar, of St. Thomas's Hospital, London; Dr. Homepopham, of South Australia, and others from a distance. The affair was entirely informal, no speeches whatever being made, and one very pleasant feature of it was the presence of several ladies belonging to the families of Drs. Sims, Gross, and Pancoast, who had an adjoining drawing room set apart for their use.

Miscellany.

KEROSENE AS A REMEDY FOR FAVUS.

MR. EDITOR, — I send the report of the following case, not that I regard favus as a rare disease, but from the fact of my first noticing it on a kitten in the family where the case occurred, and that the kitten has apparently recovered under conditions which seem to offer an interesting therapeutic hint.

About the 22d of August, while attending a surgical case, I noticed a child in the family holding a kitten which bore unmistakable evidences of favus. There were three large favus cups upon the animal, one the size of a dime upon each ear, and a third, about an inch by three quarters, on the outer side of the left hock. I cautioned the mother to watch for the first appearance of any similar thing in the children, and confiscated the kitten, intending to sacrifice it to my histological studies. After examining a portion of crusts and finding the well-known favus parasite, I shut the weakly little animal up in a shed where the floors were saturated with kerosene, and had the little fellow well fed preparatory to making permanent preparations of him. After a few days I noticed considerable improvement, and to-day I have examined the animal, and apart from the baldness left not a trace of the disease is to be seen.

The child, which had only had the kitten a couple of days, was immediately after, for other reasons, sent into the country, and in a week returned with a patch of favus, an inch and a half in diameter, in the fine hair of the right cheek. Dilute sulphurous acid and kerosene was applied after the removal of the crusts, and when last seen the case was progressing favorably toward recovery.

Neither Duhring, Fox, or Liveing mention petroleum as a remedy for favus. Neuman is the only one, so far as I know, who does so. Very sincerely,

WM. WATKYNS SEYMOUR.

TROY, N. Y., *September* 21, 1882.

◆

"THE INOCULATIVE FUROR."

MR. EDITOR, — My attention has been called to an editorial in a journal published in New York, and called the *Medical Record*, from which, under the head of The Inoculative Furor, the following extract is taken:—

"Dr. Robert Koch supplies to an imaginative English physicist materials for a theory by which tuberculosis is to be prevented. The cultivated bacilli are simply to be injected into the tissues of possible consumptives.

"Most beautiful of all, Dr. T. H. Buckler, of Baltimore, Paris, and Boston, announces an antagonism between typhoid fever and pulmonary tuberculosis. This he tries to prove by citing cases of incipient phthisis, which recovered after having an attack of typhoid fever, also by various mortality statistics. Dr. Buckler would have persons inoculated with typhoid fever, perhaps by means of infected milk. The seeds of consumption would thus be driven from the system of those who survived."

Here is a direct insinuation that the proposal to inoculate with the *materies morbi* of typhoid fever as a prophylactic of this disease in after life, and also to prevent phthisis, was simply suggested by Koch's discovery of the bacilli of phthisis. How could this possibly be the case when Koch first announced his discovery by reading a paper at Berlin on the 24th of last March, whereas my articles recommending internal inoculation as a prophylaxis of both typhoid fever and phthisis were published in the Boston Medical Journal on the 2d and 23d of February, 1882.

A recorder should be more time serving in regard to his chronology, and scrupulously careful before publication that his record is true. Did the editor by some neuro-muscular spiritualistic method unknown to sane people, find out what was going on in the brain of Koch before he announced his brilliant discovery? Koch's discovery greatly fortifies my belief in the prophylactic powers of inoculation.

Yours very truly, TH. H. BUCKLER.

◆

AUNT BETSY'S "SIMPSONS."

MR. EDITOR, — One day, not long ago, I was called here, at Hampton, Va., to see an old colored woman of the "fo-de-war" type, black as the ten of spades (which is ten times blacker than the ace), extremely voluble, and anxious to impress me with the importance of her "simpsons," of which she was determined I should have a full and clear understanding before I prescribed. She talked so fast, and had such a list of miseries that at last I told her it would be impossible to prescribe a medicine which would cure all her aches and pains unless I took them down in writing. I produced pencil and paper, and told her to begin again, which she did with great gusto. I wrote as fast as I could, but only succeeded in getting a portion of her story, which I give *verbatim et literatim*. I think it will prove at least as interesting to your readers as some pages of Uncle Remus:—

"My mis'ry, doctor, wuks right up from bofe my legs, an' up through my stummick, an' den crosst my bowels, all a shaky an' a wig-waggy! Den my right shoulder, doctor. *Law sakes!!!* Dat yer mis'ry in my right shoulder pow'ful bad sometimes. Den I has shootin' pains all up an' down my spine, dreadful! an' lumps in my flanks, an' a burnin' all over my right side, an' a *roarin'!* yes, honey, an awful roarin' in my head, an' de bones all loose in my head. Den I has pains in bofe shoulders, an' my insides dey workin' jes' like maggots!! an' I has a draggin' in my stummick an' my sistum very bad. Ef you b'lieve me, doctor, dar's a patch o' mis'ry in de small o' my back, an' when I stan' up 'pears like my insides dey stickin' to my spine! an' a wallowin' in my head, an' I don' got no appetite, an' 'pears like every minute I gwine throw up my insides. I can't drink no fresh water, drinks all my water *biled!* In de night you can hear my head a roarin' an' a buzzin', an' den my bowels gets to workin', an' you kin hear 'em a crackin' an' a blabbin'! an' dey all a shakin' an' a trimblin'. Den I has a hotness in de bone o' my neck, yes, doctor, right in de bone o' my neck, an' at fuss a *pang* riz up right acrost my neck, an' riz an' *bust!!* I knowed it wa'n't a blood-wessel else I'd a died *sure!*"

Yours truly. J. T. BOUTELLE, M. D.

HAMPTON, VA.

◆

A PATENT MEDICINE PARADISE.

A CORRESPONDENT of the *Detroit Free Press* traveling in the South describes one tendency of the colored population as follows:—

If the negroes in the South could read there would be such a demand for patent medicine, porous plasters, pills, and stomach bitters as would force every manufacturer to double his help and capacity. The negro is always ailing. No matter how healthy he looks or how strong he seems, he believes himself afflicted. If he could read almanacs and circulars he would think so twice as strongly.

At Dalton, Ga., I saw a big fellow pick up a barrel of flour as easily as I could have lifted a twenty-five pound sack, and when I complimented him on his strength he replied,—

"Yes, boss, I seems powerful strong, but you doan' know what a hard time I has of it. Ize got liber complaint, dyspepsia, and consumpshun, an' I reckon I won't neber see snow fly again."

I asked him what remedies he had been using, and he replied that he had been taking the dust of burnt leather and mixing it with cold tea. Nothing whatever ailed him, but if he could have got hold of ten dollars he would have used eight of it in buying medicine.

I was in a livery stable at Marietta when a man came in with a bottle of prepared Jamaica ginger. One of the colored men employed about the stable, who had n't lost a day for years, and who looked as rugged as a mountain, looked at the bottle three or four times, and then asked,—

"What ye got dar, Kurnel?"

"Something for apoplexy," was the reply.

"Would ye mind givin' me a sip of it, kase my apoplexy has been takin' on in de moas' drefful manner fur de las' week?"

"You can take a pull if you wish to."

The cork was drawn, and the negro lifted up the bottle and took three heavy swallows of the fiery stuff. The next three minutes were the longest and hottest ones he ever saw, but as soon as he could speak he remarked:—

"Ah! but dat stuff seems to hit de right spot. I reckon it will cure up my apoplexy all right, an' like 'nuff I may light on sumthin' else good fur congestion of de lungs an' water on de brain."

FREE HOSPITAL FOR WOMEN.

AT the seventh annual meeting of the corporators of the Free Hospital for Women, Dr. Henry C. Haven, president, in the chair, Dr. W. H. Baker reported for the Medical Board that the admissions during the year had been 126, about 90 having been the average in former like periods, this addition having been made possible by an increase of the number of beds from fifteen to twenty; that 67 patients were discharged, having been cured or relieved; that 5 had died; that 34 had gone away without having received beneficial treatment, some of them having come only for a diagnosis, and that 20 are now in the institution. One patient remained 295 days; the average stay was 45½ days. He said that the hygienic condition of the hospital is excellent. He insisted that in the selection of its beneficiaries it should take great care that its charity is not abused. He made this remark because in one or two instances persons that were well able to pay their expenses had gained, under false pretenses, admission to it, and were thus the means of keeping from some poor woman having nothing the treatment that she ought to have had. Seldom, he added, are there less than thirty to fifty applicants for admission, while the growth of the "out-patient" work is such that three afternoons in each week, instead of two, are to be given to it, with the prospect of a still further devotion of time to it in the near future. He expressed the opinion that the largest work of the hospital is, and is to be, in the knowledge of special cases that it gives to physicians who have served in it, and who have gone into general practice, and alluded with gratification to the annexation to the hospital, for its purposes, of the house adjoining it on East Springfield Street.

Edwin H. Sampson, treasurer, stated that its receipts had been $6767.88, and its expenditures $5574.91, leaving a balance in its favor on October 2d of $1192.97; the balance at the beginning of its year just ended was $1218.80. The building fund amounts to $10,755.37. Trinity Church has donated $1715 for the endowment of a free bed. Mr. Sampson made an appeal for such an increase of the income of the hospital that its additional room, already or soon to be occupied, may be properly fitted up, and that the number of beds may be made more than twenty, its present maximum.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 28, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	596	210	24.38	12.85	7.35	2.84	7.51
Philadelphia	846,984	311	96	16.40	4.18	—	2.57	10.61
Brooklyn	566,689	236	84	19.46	13.54	7.19	1.27	5.07
Chicago	503,304	185	81	31.52	7.16	5.43	3.80	10.32
Boston	362,535	156	45	23.72	8.97	4.49	6.41	9.62
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	149	64	39.39	1.34	4.70	2.01	20.80
Cincinnati	255,708	111	41	27·27	9.99	6.36	1.82	3.64
New Orleans	216,140	110	31	11.82	.91	.91	1.82	.91
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg	156,381	61	26	44.25	6.56	8.20	13.01	13.01
Buffalo	155,137	68	30	41.16	2.94	2.94	4.41	23.32
Milwaukee	115,578	40	24	27.50	10.00	15.00	—	7.50
Providence	104,857	27	9	18.52	—	3.70	—	7.41
New Haven	62,882	16	4	12.50	12.50	6.25	—	—
Charleston	49,999	—	—	—	—	—	—	—
Nashville	43,461	15	5	20.00	6.66	13.33	—	—
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	15	7	40.00	—	20.00	6.66	6.66
Cambridge	52,740	—	—	—	—	—	—	—
Fall River	49,006	12	6	33.3[illegible]	8.33	8.33	16.66	8.33
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	8	1	12.50	—	12.50	—	—
Springfield	33,340	10	1	—	—	—	—	—
Salem	27,598	9	3	11.11	—	11.11	—	—
New Bedford	26,875	9	3	33.33	—	11.11	—	—
Somerville	24,985	6	1	33.33	16.66	16.66	—	—
Holyoke	21,851	11	5	54.54	—	18.18	9.09	9.09
Chelsea	21,785	5	4	40.00	—	—	—	40.00
Taunton	21,213	—	—	—	—	—	—	—
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	6	1	50.00	—	—	33.33	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	—	—	—	—	—	—	—
Newburyport	13,537	1	1	—	—	—	—	—
Fitchburg	12,405	3	0	—	—	—	—	—
Malden	12,017	3	1	—	—	—	—	—
Fifteen Massachusetts towns	116,564	51	19	31.36	3.92	6.84	11.76	9.80

Deaths reported 2234 (no reports from St. Louis and District of Columbia): under five years of age 764: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 550, consumption 354, lung diseases 180, diphtheria and croup 189, diarrhœal diseases 124, typhoid fever 73, scarlet fever 47, malarial fevers 31, small-pox 27, whooping-cough 18, cerebro-spinal meningitis 15, puerperal fever 13, measles seven, erysipelas four, intermittent fever one, typhus fever one. From *scarlet fever*, Cincinnati 16, Chicago 10, New York and Brooklyn five each, Buffalo four, Pittsburg two, Boston, Baltimore, New Orleans. and Worcester one each. From *malarial fevers*, New York 12, Brooklyn and New Orleans five each, Chicago two, Baltimore, Buffalo, New Haven, and Nashville one each. From *small-pox*, Baltimore 13, Philadelphia six, Chicago and New Orleans three each, Pittsburg two. From *whooping-cough*, New York eight, Philadelphia and Brooklyn three each, Chicago two, Boston and Pittsburg one each. From *cerebro-spinal meningitis*, New York four, Chicago, Baltimore, Buffalo, and New Bedford two each, Philadelphia, Boston, and Holyoke one each. From *puerperal fever*, New York, Chicago, Boston, Milwaukee, and Providence two each, Brooklyn, Cincinnati, and Holyoke one each. From *measles*, New York six, Pittsburg one. From *erysipelas*, New York two, Chicago and Baltimore one each. From *intermittent fever*, Haverhill one. From *typhus fever*, New York one.

Seventy-eight cases of small-pox were reported in Baltimore, Cincinnati three, Pittsburg two; typhoid fever 39, diphtheria 20, scarlet fever eight, in Boston; scarlet fever 25 and diphtheria five, in Milwaukee.

In 26 cities and towns of Massachusetts, with a population of 807,755 (population of the State 1,783,086), the total death-rate for the week was 19.11 against 17.20 and 20.32, for the previous two weeks.

For the week ending October 7th, in 166 German cities and towns, with an estimated population of 8,331,961, the death-rate was 22.7. Deaths reported 3630: under five years of age 1752; consumption 452, lung diseases 238, diphtheria and croup 175, diarrhœal diseases 216, scarlet fever 88, typhoid fever 76, measles and rötheln 32, puerperal fever 12, small-pox (Berlin and Mulheim one each) two, typhus fever (Dortmund two) two. The death-rates ranged from 11.3 in Metz to 32.6 in Chemnitz; Königsberg 31.9; Breslau 29.3; Munich 25.8; Dresden 18.3; Berlin 24.5; Leipzig 27.4; Hamburg 19.9; Cologne 20.9; Frankfort a. M. 17.5; Strasburg 16.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending October 14th, the death-rate was 21.7. Deaths reported 3522: acute diseases of the respiratory organs (London) 302, diarrhœal diseases 147, scarlet fever 137, fevers 87, measles 67, whooping-cough 64, diphtheria 33, small-pox (London four) seven. The death-rates ranged from 12.6 in Plymouth to 34.3 in Oldham; Wolverhampton 15; Leicester 16.5; Birkenhead 18.7; London 20.9; Manchester 25.2; Leeds 27.2; Liverpool 28. In Edinburgh 15.7; Glasgow 23.1; Dublin 24.4.

For the week ending October 14th, in the Swiss towns, there were 27 deaths from consumption, diarrhœal diseases 20, lung diseases 17, typhoid fever eight, puerperal fever six, scarlet fever four, diphtheria and croup two, erysipelas two. The death-rates were, at Geneva 11.4; Zurich 8.1; Basle 17.9; Berne 19.6.

The meteorological record for the week ending October 28th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
October, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 22	30.248	51	55	41	87	72	81	80	N	E	NE	6	15	5	O	O	O	—	—
Mon., 23	29.971	52	56	49	93	88	93	91	N	E	E	6	6	2	G	O	O	—	—
Tues., 24	29.727	51	55	51	93	91	60	81	NE	N	NW	5	4	19	R	R	O	—	—
Wed., 25	29.809	45	58	44	68	41	60	56	NW	NW	W	17	16	6	C	C	F	—	—
Thurs., 26	29.913	47	68	40	57	35	57	50	SW	W	NW	8	16	10	O	C	C	—	—
Fri., 27	30.115	49	58	39	65	42	59	55	W	W	W	9	11	4	C	O	O	—	—
Sat., 28	30.295	45	56	41	66	39	68	58	N	SE	SE	6	10	6	F	C	C	—	—
Means, the week.	30.011	49	58	44	76	58	68	67										14.00	12.

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OBITUARY. DR. O. C. TURNER.

Dr. O. C. Turner, Assistant City Physician of Cambridge, died Tuesday, October 31st, at his residence in that city, of typhus fever, contracted while in attendance upon a family of recently arrived immigrants.

He was born in Attleborough, Mass., received there his early education, was graduated at Tufts College in 1859 and at the Medical School at Georgetown, D. C., 1864, and was for three years in the service of the United States during the war of the rebellion. After a brief professional experience in his native town he removed to Vermont and subsequently to Cambridge.

Death came to him while in active service, as it might have done at Gettysburg or the Wilderness, and his deserts are surely now no less though the field of battle is unrecorded.

He will be long and affectionately remembered by his professional associates, and the sick poor of Cambridge cannot forget their modest, cheerful, skillful, and unwearied physician.

Obstetric and Gynæcological Section of the Suffolk District Medical Society. — A meeting will be held at 19 Boylston Place, on Saturday, November 11th, at eight P. M. The following paper will be presented: Ergot and Ruptured Uterus, Dr. E. M. Buckingham. Dr. R. B. Dixon will present a new perforator. J. B. Swift, *Secretary*.

Books and Pamphlets Received. — A Guide to Therapeutics and Materia Medica. By Robert Farquharson, M. D. Edin., F. R. C. P. Lond. Third American Edition, revised by the Author. Enlarged and adapted to the United States Pharmacopœia by Frank Woodbury, M. D., Physician to the German Hospital, Philadelphia. Philadelphia: Henry C. Lea's Son & Co. 1882.

Quiz Compends. No. I. Questions on Human Anatomy. By Samuel O. L. Potter, M. A., M. D., Author of an Index of Comparative Therapeutics, etc. With Sixty-Three Illustrations. Philadelphia: P. Blakiston, Son & Co. 1882.

Lectures.

ON THE TREATMENT OF PNEUMONIA.[1]

BY PROFESSOR DUJARDIN-BEAUMETZ,

Physician to the Hôpital St. Antoine, Member of the Academy of Medicine, Paris, France.

GENTLEMEN, — I shall devote this lecture to the treatment of pneumonia. The history of the therapeutics of pulmonary diseases comprehends no subject of greater interest than this. Just as we have seen Huxley in England give a whole treatise of physiology while writing about the cray fish, so in describing the various treatments of pneumonia which have at different times prevailed, and the discussions which have arisen therefrom, one would go over about the entire history of the treatment of disease in general. Permit me, then, as briefly as possible, to sum up the history of the therapeutics of pneumonia.

The suddenness and gravity of the invasion, the intensity of the febrile phenomena, the profound disturbance of the respiration, all conspire to render pneumonia one of the most serious diseases of the economy. Hence the ancients, not having for their guide auscultation and percussion, made of this affection the type of phlegmasias. They directed against this disease, which they regarded as one of the most dangerous, a treatment proportional to the evil to be overcome, and drew from the arsenal of therapeutics the most energetic remedies. We must triumph over the disease, said Sydenham, and this pernicious doctrine has for a long time directed the entire therapeutics of pneumonia.

It was forgotten that in this contest between the physician and the disease there exists a patient; more than all, the true Hippocratic doctrine was lost sight of, and the definition which Hippocrates gave to the disease. The father of medicine regarded the morbid phenomena as symptoms of the struggle by which nature was attempting to effect a removal of the disease; it was of importance, then, not to disturb (without very strong reasons) this spontaneous tendency of nature toward restoration.

During long years, then, treatments of the most heroic kind were instituted against pneumonia, and what served to perpetuate the error, was the fact that pneumonia was seen to disappear and patients to get well under these treatments. Only, — the period of convalescence was long, and it was the custom to attribute this enfeeblement not to the medication, but rather to the pulmonary affection itself.

In the eighteenth century we observe several tentatives made in good earnest to establish a hygienic treatment of pneumonia, but these attempts on the part of Van Swieten and Boerhaave were soon forgotten, and the profession came back, more determined than ever, to modes of treatment the most violent and heroic. But this entire scaffolding, for ages based on tradition, was destined to fall to the ground under the destructive influence of two methods of investigation which came to be applied to the study of diseases; statistics on the one part, and the observation of temperature on the other.

The doctrine of Broussais, which had pushed to its extreme limits the diabolical methods which it had engendered, aroused a vigorous reaction, and this reaction took for its guide Observation and Statistics. Andral, Louis, Chomel, Valleix rallied around a banner which had for device, *Numerandæ et perpendendæ observationes.* Then the school of Vienna followed the school of Paris in its new departure, and Skoda and his pupil, Dielt, showed us all the advantages which one might derive from statistics in the study of the treatment of disease.

What did statistics show when applied to the examination of the different treatments of pneumonia? That the absence of all medication gave better results than medication of a very active kind. Here was a fact of prime importance which destroyed at one blow the therapeutic rule which had heretofore prevailed, namely, that it is necessary to treat a severe disease by severe remedies.

But statistics alone can never settle a disputed point in therapeutics. The statistical method of demonstration has certainly a high value in the other sciences; it does not, however, in medicine, and especially in therapeutics, give all the results which might be expected of it. Therefore, without going quite as far as Forget, who regards statistics (*la statistique*) as "an obliging maid who gives herself to the first comer," we may properly affirm that the medical products which are the offspring of this method of observation are incongruous and of little vitality.

In fact, in medicine, and particularly in therapeutics, observations are seldom or never proper subjects of comparison. Individual conditions, and the type of the disease more especially, may at each instant modify the results, and this it is that explains the popularity and the decadence of therapeutic agents.

A remedy which at one time has wrought wonderful cures, at another time is employed with no success at all, and this difference results from the circumstance that in the one set of cases the disease appeared in a mild form, while in the other cases it was grave. Would you have a proof of what I now advance? Cast your eye over the important statistics published by Lebœuf, *à propos* of the treatment of pneumonia, and you will there see that the mortality has varied from 0 to 40 per cent. according to the years, and this, although the same therapeutic methods were employed.

The application of the thermometer to the study of diseases was a weapon still more powerful against the doctrines of the past. Thanks to Boerensprung, Traube, Wunderlich, the use of the clinical thermometer has become a matter of routine in our private and hospital practice. This little instrument has taught us that a great number of diseases have a regular march, a definite cycle, whose periods of "augment," "fastigium," and "decline" may be observed.

For diseases with a definite cycle, abortive systems of treatment do not exist, and just as we cannot arrest typhoid or eruptive fevers in their march, so also we are unable to throttle pneumonia in its evolution; hence the first condition for a fair appreciation of the results of medication directed to a pathological state, is to know the normal cyclical evolution of the affection. As for pneumonia, you know its evolution; no subject at the present day is better understood. Simple pneumonia, also called lobar pneumonia, the croupous pneumonia of the Germans, is characterized, from an anatomical point of view, by a fibrinous exudation which occupies the interior of the pulmonary alveoli; this exudation, at the end of a certain time, undergoes a granulo-fatty degeneration which permits its resorption and removal. These essential modifications, which characterize simple pneumonia, and which constitute by their *ensemble* what has been described under the name of hepatization, are accompanied by a train of febrile manifestations which comprehend the general symptoms of pneumonia, and in which we observe a sudden invasion, a stationary period, and finally a period of defervescence.

---

[1] Translated, by permission of the author, from advanced sheets, by E. P. Hurd, M. D., Newburyport, Mass.

What is of most importance for us to know from the point of observation which we occupy, is at what moment this defervescence takes place when the disease is left to itself. Jurgensen has furnished us in this particular some important statistics; he has, in fact, studied in seven hundred and twenty-one cases the epoch of this defervescence, and on consulting the tables which he has given, it appears that ordinarily the change takes place on the fifth or on the seventh day. Quite recently also our colleague, Dr. Fernet, reviewing the subject, has demonstrated the regular and cyclical march of simple acute pneumonia.[1]

It is worthy of note that defervescence may take place in a much shorter space of time, and pneumonias have been recognized which have completed their evolution in three or four days. Thus out of seven hundred and twenty-one cases in Jurgensen's tables, in thirty-seven defervescence took place at the end of three days, and in fifty at the end of four days, while in one hundred and twenty it came on at the end of five days, and in one hundred and sixty-five at the end of seven days.

Having once possessed yourself of the fact that simple fibrinous pneumonia, without being influenced by any treatment, has a defervescence which shows itself ordinarily towards the seventh day, let us examine and pass judgment on the different remedial measures which have been proposed to combat this phlegmasia.

I will group these remedial measures under three heads. First, we will study those which accomplish their results by causing a profound perturbation of the economy, and a lowering of the vital forces, and of the temperature accompanying this perturbation; I call this spoliative medication. The second have for their effect to support the forces of the patient, — tonic medication. The third are based upon the study of the normal evolution of the malady, — expectant methods of treatment.

The spoliative medication comprises blood-letting, antimonials, digitalis, veratrum, quinine, and refrigeration.

Venesection has long been the basis of the therapeutics of pneumonia. It has been the fashion, down to a very recent period, to bleed in this disease, and to bleed freely, and every physician who did not bleed his patient was derelict in duty. If there was any difference of opinion, it was not concerning the advisability of bleeding, but as to the quantity of vital fluid which ought to be abstracted, and the best place for venesection. Ought we to bleed the veins of the same side, ought we to open the vein transversely or longitudinally? Such questions were discussed. Sydenham used to take from ten to fifteen ounces of blood in the morning, and as much in the evening, and the next morning, taking in all between two and three pints of blood. Borsieri would take a quart a day; in Italy they would exceed two quarts; and Bouillaud, our illustrious master, following the tradition of Broussais, who used to bleed to syncope, formulated in 1837 the method of blood-letting known as "coup sur coup" (blow after blow). He prescribed, the first day of treatment, two bleedings from the fore-arm of four cupfuls, and the application of numerous wet cups; the next day another bleeding and leechings or scarifications; the third day still another bleeding, which was renewed the fourth and the fifth day, if the pneumonia resisted. This word "resisted" is characteristic — it brings into view the idea of the struggle between the disease and the medication, which I spoke of at the beginning of this lecture, and which at this epoch directed the therapeutics of pneumonia.

In 1853 Valleix, in his Guide du Médecin Praticien, and Gresolle, in his Treatise on Pneumonia spoke of bleeding as the first therapeutic measure, dominating all the others.

In judging of the action of blooding-letting in pneumonia, we ought not to rely on statistics alone; we ought to study the composition of the blood in a patient affected with pneumonia, then ascertain what effect blood-letting can have on such a condition. Let us see first what are the results of bleeding on the symptoms of pneumonia. As far as the exudation is concerned, the action of bleeding is *nil*, it can neither prevent this exudation nor hasten its regression.

Is the action of bleeding more manifest on the local and general symptoms? Yes, it modifies both the temperature and the dyspnœa. In febrile states bleeding appears to me to be one of our most powerful anti-thermic remedies. Observe what happens in typhoid fever; when a hæmorrhage of considerable intensity takes place, there is a rapid fall in the temperature, and it is the same in pneumonia, and sometimes this lowering of fever heat lasts.

This is what has just taken place in our hospital service, in the case of a young man of twenty-six years of age, who occupies No. 9 of the male wards. He has had pneumonia of the left upper lobe. His temperature on the fifth day of the sickness was 40.8° C.; he was bled to ten ounces, and his temperature fell gradually, and has not again risen.

At the same time that the temperature falls the dyspnœa abates, and this explains the persistence of our fathers in considering bleeding as the best treatment of pneumonia.

But the advantages, considerable as they may seem to be, which we have just noted in favor of bleeding, are more than offset by serious disadvantages. We know at the present day sufficiently well the state of the blood in pneumonic patients, thanks to the labors of Hanot, Grancher, Quinquaud, and especially to the researches of Professor Hayem.

---

[1] Fernet. De la Pneumonia Franche Aigue, de son Evolution, et de sa Crise. Arch. Gen. de Med., July and August, 1881, pages 5 and 155. According to this author the evolution of pneumonia is perfectly represented by the march of the fever, and figured by the thermometrical curve.

The invasion of the disease is marked by a slight chill. Then comes an intense fever, which persists without abatement for five to seven days (as the average), and then falls rapidly. Concurrently with this fever a local lesion is developed in the lung, a lesion which finds expression in a fibrinous exudation which solidifies (red hepatization), forming in the pulmonary parenchyma one or more compact blocks. This hepatization, which is the lesion of pneumonia at the period of "fastigium," lasts in general as long as the fever, and then undergoes transformations which permit the return of the organ to the normal state (breaking up and elimination of the exudation). This last phase of organic reparation belongs rather to the period of convalescence than to that of the malady in its active manifestations. By this evolution, and by this local lesion, pneumonia resembles the eruptive fevers.

The crisis appears about the sixth or seventh day, with sudden defervescence and abundant sweats.

The modifications of the urine, epistaxis, diarrhœa, naso-labial eruptions, are not critical phenomena, but are (with the exception of the eruption) accidents or complications. The naso-labial herpetic eruption appears regularly about the third day of the disease, preceding, by a considerable interval, the crisis, and is regarded as another local manifestation of the disease.

Whether you employ the chemical tests of Quinquaud, or the process of enumeration of the globules, or the new methods of examination of the blood proposed by Hayem, this is what is observed in the blood of individuals affected with pneumonia. The fibrine presents quite a considerable reticulum, the red corpuscles are not diminished, and the hæmoglobine remains almost at the normal figure; but, as Grancher has well shown, the number of white globules augments, and this evolution follows the thermic curve.

If you bleed these patients, you diminish the mass of blood only for a moment, for the blood-vessels take up from the lymphatic vessels that surround them a quantity of fluid equal to that which you have abstracted. But if you have not diminished in any durable way the mass of blood, you have certainly increased the number of white globules, and as these are already in excess in pneumonia, you have put your patient in conditions favorable for suppuration. You know, in fact, gentlemen, that there is, between the production of pus and the number of white globules existing at any given moment in the blood, a very intimate relation. This tendency to purulence may then occasion suppuration of the intra-alveolar exudation, and so produce a termination of the gravest kind.

To sum up, then, if bleeding may lower the temperature and diminish temporarily the dyspnœa of the patient, it enfeebles the latter, and puts him in a condition favorable for suppuration, without diminishing, in any degree whatever, the normal march of the exudation.

This is, in truth, what has taken place in the case of the patient (No. 9) of whom I have just spoken; by the bleeding we obtained a lowering of the temperature, but immediately delirium set in, and a general enfeeblement ensued, without the slightest evidence, by the ordinary physical signs, of any diminution of the pulmonary exudation.

Be it understood that by the word "blood-letting" I mean only venesection; I do not include cupping, which appears to be of considerable utility in relieving the pain of pneumonia, acting rather on the principle of revulsion than of spoliation.

By the side of venesection we should place another kind of treatment which has been, and in fact is now, much in vogue; I allude to medication by antimonials, and especially tartar emetic. This medicament has been the subject of earnest discussions and angry partisanship. Denounced by Guy Paton, and forbidden by the Faculty, it was long kept under the ban; eventually it obtained a firm place in the materia medica, from which it has hardly yet been driven. It is to Rasori, an Italian physician, that the employment of tartar emetic is due. Rasori maintained that in every inflammatory disease we ought to combat the stimulus, therefore he was in the habit of administering tartrate of antimony in large doses, giving from one half gramme to one gramme in a quart of water, and repeating the dose during the day; he at first associated blood-letting with this medication, then relied on the latter alone. Many of his disciples have carried this treatment still further, giving as much as six grammes (ninety grains) daily of this medicament, so that the patient during his sickness would sometimes take as much as sixty grammes (about two ounces). At the present day much smaller doses are given. We do not ordinarily prescribe more than one eighth of a grain, and this may be given with syrup of poppies, which makes it better tolerated by the stomach.

Tolerance, in fact, is an essential part of this medication; most partisans of the antimonial treatment claim that the less the emetic and purgative effect, the more curative the medicament in pneumonia. Laennec, who was one of the most ardent promoters of this mode of treatment, and who even went so far as to regard tartar emetic as specific in pneumonia, has insisted on this tolerance. Sign of profound adynamia to some, this tolerance has been regarded by others as a favorable symptom, and a variety of ways have been recommended for obtaining it. Ancelon, of Dieuze, orders the limitation, and even the suppression, of all liquid ingesta; Herard counsels to employ nothing but distilled water in making the antimonial solution; the greater number associate opium with the antimonial.

How does tartar emetic act in pneumonia? Let us examine, first, its physiological action, then its action in the disease. Physiologically it produces a profound local irritation. It develops pustules on all the points with which it comes in contact. Grisolle, in cases where tartrate of antimony has been given by mouth, has observed ulcerations throughout the whole extent of the alimentary canal; in the throat, œsophagus, stomach, and intestine. These ulcerations have even caused strictures, from cicatricial contraction. This local action of the antimonial explains its emetocathartic action. It has even provoked such obstinate diarrhœa and vomiting that the symptoms have resembled those of cholera, hence the name "cholera stibii."

Binz has demonstrated its direct action on the heart; it diminishes the contractions of this organ, and thereby enfeebles the circulation and causes a lowering of temperature; moreover, it depresses the nervous system, and, by the nausea which it provokes, gives rise to a condition resembling sea-sickness.

The antimonial treatment then, like blood-letting, is both depressant and refrigerant.

The action of tartar emetic on the pulmonary exudation is absolutely *nil;* it lowers the fever heat, but this result is obtained at the expense of grave perturbations of the economy; enduring lesions of the digestive tube are often produced, and the forces of the patient are unduly depressed. In large doses it is a dangerous medicine, and the remembrances which I have retained of results obtained by this method of treatment when I was just entering on my medical career have left an impression far from favorable; if it is dangerous in the case of adults it is far more so when administered to children. I have, in fact, seen little pneumonic patients made far sicker by the medicine than they were by the disease.

I would then give tartar emetic in pneumonia only to produce an evacuant effect and to clear the lungs, through the efforts of vomiting, of the mucosities which encumber them. This emetic action you may obtain also by other antimonial preparations, — kermes mineral and the white oxide of antimony. The latter preparation, which is a good expectorant, especially for children (recommended highly by Roger), may be given in the dose of a scruple or half a drachm in mucilage or syrup. The following calmative potion may be taken during the day; it contains kermes: —

℞ Hydrated sulphuret of antimony . 0.50 (viiss. gr.)
Aquæ lauro cerasi
Aquæ tiliæ Europ.,
Aquæ lactucarii
Syrup of poppies . . . . āā 30. (℥i.) M.

By the side of these medicaments I would place ipecac, whose effects in the treatment of pneumonia have been much vaunted. The school of Montpellier has most earnestly advocated the use of this remedy in pneumonia. Broussonnet, Pecholier, Ressiguier, among others, have recommended it. Ipecac acts in two ways: it modifies the secretion of the bronchial glands and aids expectoration; on the other hand, it excites vomiting and thus diminishes congestion of the lungs and aids the expulsion of bronchial mucus. Perhaps, also, we should mention in this connection the slowing action of ipecac on the circulation, so well described by Pecholier, Dyce Duckworth, and others. Ipecac is given in pneumonia in the dose of one gramme and a half to two grammes (twenty to thirty grains).

We come now to other medicaments which act on the circulation and the temperature,—digitalis, quinine, and veratrum.

The usage of digitalis in the treatment of inflammations originated with the Germans. Traube, in 1850, was one of the first to recommend it in phlegmasias; it is the school of Strasbourg that deserves the credit of demonstrating all the benefit which we may obtain from this medicinal agent in the treatment of pneumonia. The labors of Hirtz, Kulp, and Coblentz deserve mention in this connection, while in France Gallard, Picot, and Tony Saucerotte have all vaunted the good results of digitalis in pneumonia.

Having spoken at length of the physiological and therapeutical effects of digitalis when lecturing on diseases of the heart, I shall not repeat what I then said. You can readily understand, gentlemen, that digitalis, by its action on the circulation, can have a marked influence on the two manifestations the most characteristic of the fever, the pulse and the temperature. But these antipyretic effects are not obtained without certain dangers, and while recognizing the fact that in the dose of one gramme of the powder of the leaves in infusion or maceration, digitalis produces a remarkable lowering of the temperature, it may nevertheless dangerously affect the heart. Therefore, despite the authority of the Strasburg school, this medication is little employed in our country.

The same may be said of the treatment by quinine, so much in vogue in Germany, and employed with success by Vogt, Wachsmuth, Liebermeister, and Jurgensen. But sulphate of quinine in the proper therapeutic dose is a very uncertain antipyretic medicament, and in order to obtain a marked fall in the fever heat you are obliged to give doses which are almost toxic. This is, indeed, what Liebermeister, and especially Jürgensen, have done, for they have administered as much as five grammes (seventy-five grains) of sulphate of quinine in a single dose to a pneumonic patient. It is a dangerous practice, and is to be reprobated, and I would recommend you never to give quinine in pneumonia in large doses except where there is a marked malarial element in the case.

Along with quinine as an antipyretic we must class veratrum viride and its alkaloid veratrine. Thanks to the labors of Aran, Piedagnel, Norwood, and especially Thibirtz, you know the depressant action of this drug on the circulation; you understand, therefore, why veratrum has been advised in pneumonia. It has been given in the form of granules of veratrine, each granule containing one milligramme (one sixtieth of a grain), three to five of these granules being a very full dose. Much oftener you will hear prescribed the tincture of veratrum viride, in the dose of four to six drops [two drops every hour or two till there is a marked slowing of the pulse, is a popular way of giving it in the United States]. I do not think that much success has followed, or is likely to follow, this treatment, at least in this country; it rapidly induces vomiting and collapse, without notably modifying the fever or lessening the duration of the pneumonia.

I shall have finished the consideration of remedies which produce diminution of the pulse and temperature, and which act as antipyretics, when I shall have spoken of the direct application of cold to patients affected with pneumonia. The subject of cold baths in pneumonia (a mode of treatment confined mainly to Switzerland and Germany), also those modes of treatment which, by supporting the system during the evolution of the malady, appear to me to be far the most rational, I shall reserve for my next lecture.

Original Articles.

THE MEDICO-LEGAL RELATIONS OF CHRONIC ALCOHOLISM; ITS PATHOLOGICAL ASPECTS.[1]

BY G. K. SABINE, M. D.

ALTHOUGH the acute form of alcoholic poisoning is not unfrequently the immediate cause of death, and the chronic alone rarely so, the two are often combined so that the signs of the latter should be familiar to the medical examiner.

Of all the various conditions that are attributed to the habitual use of alcohol but very few, if any, are pathognomonic. The statements of different observers vary greatly in regard to the post-mortem appearances of the chronic as well as of the acute form, and the question to what degree certain diseases may be attributed to this form of poisoning remains an open one. In fact almost every known chronic affection has been attributed some time or other to the intemperate use of alcohol. It is probably the fact that the remote is frequently looked upon as the immediate cause. That the habitual and long-continued use of alcohol so alters the tissues and impairs their functions that they are more prone to become diseased there can be no doubt.

Perhaps there is no question which the medical examiner is more frequently called upon to decide than whether or not he has to deal with a subject who has been an habitual drunkard.

Although no single pathological condition is sufficient to determine this positively, yet there are certain ones which point strongly in this direction, and the same inference can be drawn from others taken collectively which are almost equally conclusive.

Among the various pathological conditions resulting from chronic alcoholism are the following:—

CHANGES IN THE SKIN.[2]

In the earlier stages of this affection the skin is remarkably smooth and soft, owing to an increase in the fatty tissue. According to Frerichs[3] the secretion contains a larger amount of oil than normal, a condition similar to that which exists when cod-liver oil is taken in large doses for some length of time. Later on the skin becomes dry, and on the extremities hard and inelastic.

---

[1] Read before the Massachusetts Medico-Legal Society, June 13, 1882.

[2] The following statements are largely taken from Baer.

[3] Klinik der Leberkrankheiten, l. c., S. 319.

Acne rosacea, consisting of an inflammation and even suppuration of the sebaceous glands, is among the characteristic symptoms of the intemperate use of alcohol. The nose and face are its favorite seat. Besides the nodules the skin is reddened owing to the dilated capillaries and consequent blood stasis, and is also infiltrated to a greater or less degree.

THE BLOOD.

The most striking change in the blood is an increase in the watery elements, and diminution in the fibrine. It contains much serum, forms no or only very small coagula, and is of a very dark color; hence the term "venous plethora," used by some of the older authors. The dark color is explained by an increase in the hydrogen and carbon (Steinheim); or by a destruction of the red blood corpuscles (C. H. Schulz), so that less oxygen is taken up and less carbonic acid given off. Another peculiarity presented by the blood is the increase of fat contained in it. It has been stated that not unfrequently the serum of blood drawn from a person suffering from delirium tremens is more or less opaque or even milky (Morgagni, Nasse), this appearance being due to an excessive amount of fat.

FATTY TISSUE.

There is a marked increase in the subcutaneous fat, in the fat between the muscles, about the different organs, especially heart, kidneys, intestine, in the greater and lesser omenta, in the mesentery, etc. In the later stages of alcoholism, when the digestion becomes impaired and the blood deteriorated, this accumulation of fat disappears. According to Rokitansky there is an increase of fat in the marrow of the bones, the bony tissue at the same time being atrophied.

In the earlier stages of the affection the increase of fat is due to an infiltration rather than to a degeneration. The fatty liver, for instance, is of essentially a different nature at this time from that met with later on in the disease.

THE STOMACH AND INTESTINE.

A chronic catarrhal condition of the stomach is quite constant, and appears early in the disease. This is indicated by abundant soft gray mucus, projections of the mucous membrane, and by the slaty color that occurs, especially near the pylorus. Another form is very apt to be met with which is characterized by circumscribed hypertrophies of the whole mucous membrane (*gastritis prolifera*), and produces little warty projections (*gastritis verrucosa*); later larger polypoid growths result (*gastritis polyposa*).[1]

Owing to the disturbance of circulation which takes place later in other organs the return of blood from the stomach is interfered with so that a varicose condition of some of the veins is produced.

The hypertrophy is very apt to be accompanied by dilatation of the glands, due to compression at their outlet, so that small cysts which are filled with a clear fluid and project from the surface result. According to Klebs[2] an inflammation of the submucous tissue may be produced by the excessive use of alcohol, and this go on to suppuration, or it may result in the formation of large masses of connective tissue without destruction of the mucous membrane. In this manner it occurs at the pyloric extremity, producing stenosis.[3]

The continued irritation of the diseased mucous membrane is productive of a variety of ulcerations, from the small hæmorrhagic erosion, characterized by a superficial loss of substance, to the so-called round or perforating ulcer.[4]

According to Erbstein,[5] after administering large quantities of dilute alcohol to dogs for three or four days the peptic and ordinary gland cells of the stomach are found cloudy and granular. The lumen of the pyloric glands is plugged by a finely granular, yellowish or yellowish-brown mass. In extreme cases fat drops appear in the altered cells. In most cases chronic alcoholism produces no marked effect on the intestine although in many a chronic catarrh exists.

THE LIVER.

The liver is the first and the most severely affected by the abuse of alcohol of any organ in the body. The alcohol being taken up by the portal system is carried directly to this organ, and there, by its irritating effect, produces various disorders according to the individual's condition, and more especially the character of the alcohol. The more concentrated the alcohol the sooner and the more severely is the liver affected.[6] Beer and wine seldom affect the liver, and are almost never productive of severe forms of degeneration.[7] The most frequent affections of the liver produced by chronic alcoholism are simple fatty infiltration,[8] inflammation of the parenchyma, and fatty degeneration of the same,[9] and lastly inflammation and hyperplasia of the interstitial connective tissue.

Among the causes of fatty liver the abuse of alcohol is one of the most prominent. According to Frerichs it ranks only second, chronic disease of the lungs standing at the head of the list. He says: "Of thirteen individuals who died of delirium tremens, in six the liver was very fatty, in three the organ contained little fat, and in two none at all; lastly, two died of cirrhosis of the liver." It is probable, but not absolutely certain, that the alcohol acts by retarding the metamorphosis of tissue[10] and the blood being overcharged with fat deposits it in this organ.[11]

"In higher grades the liver is enlarged, but usually appears flattened, the edges are generally thickened and rounded off. The peritoneal covering of the liver is transparent, smooth, and shining. According to the grade of fatty infiltration the surface of the liver is yellowish red or distinctly yellow. The consistence of the organ is diminished; it feels doughy, and pits on pressure with the finger. On incision we meet little resistance; a coating of fat remains on the warmed knife blade. The cells in the periphery of the acini first become infiltrated, and later on those nearer the centre."[1] The quantity of blood in the capillaries is diminished in proportion to the amount of infiltration.[2] On microscopic examination, according to the grade of the disease, the enlarged or usually rounded liver-cells appear filled with fine fat globules, or those have united to form single larger drops, or, lastly, individual liver-cells are entirely or mostly filled by one large drop of fat.[3]

---

[1] Orth, Diagnosis in Pathological Anatomy, page 285.

[2] Handbuch der Pathologischen Anatomie, S. 179.

[3] Birch-Hirschfeld, Lehrbuch der Pathologischen Anatomie, S. 831.

[4] Klebs, Handbuch der Pathologischen Anatomie, S. 186.

[5] Virchow's Archiv, Bd. 55, S. 469.

[6] Frerichs, A Clinical Treatise on Diseases of the Liver, vol. ii., p. 33. Sydenham Trans.

[7] Ibid.

[8] Frerichs, A Clinical Treatise on Diseases of the Liver, vol. i., p. 299. Klebs, Handbuch der Pathologischen Anatomie, S. 382. Orth, Diagnosis in Pathological Anatomy, p. 318. Niemeyer, Text-book of Practical Medicine, vol. i., p. 656.

[9] Klebs, Handbuch der Pathologischen Anatomie, S. 406.

[10] Niemeyer, Text-book of Practical Medicine.

[11] Baer, Alcohol.

Fatty or granular degeneration of the liver is attributed to the abuse of alcohol by Baer, who quotes Klebs in so doing. The reason why the latter assigns this as a cause is perhaps owing to the fact that he makes a somewhat different classification of the diseases of the liver, considering certain forms as degeneration which are looked upon by other authorities as simply infiltration. According to him the direct action of other toxic substances upon the liver, such as hydrocyanic acid, carbonous oxide, phosphorus, arsenic, and antimony produce this degeneration. Among the organic substances alcohol, ether, and chloroform hold an important position.

INTERSTITIAL HEPATITIS. CIRRHOSIS OF THE LIVER.

The most common cause of this form of interstitial hepatitis, which extends uniformly over the whole organ, is usually considered to be the intemperate use of alcohol, still this is not necessary; most drunkards do not have a cirrhotic, but a fatty liver, and many persons with cirrhosis are not in the habit of dram drinking.[4] Certainly cirrhosis is so commonly the result of the abuse of alcohol that when met with the cause may fairly be suspected.[5] Frerichs speaks of it as "the chief cause."

Birch-Hirschfeld says that it is doubtful if cirrhosis is ever due to any other cause. The volume of the liver is increased or diminished according to the stage of the process. It is only accidentally met with in the early stages. The principal change produced in the liver consists in an increase of the interlobular tissue, and the appearance of small grayish masses at the periphery of the lobules. The consistency of the liver is increased. The cause of this change consists of a growth of granulation tissue from Glisson's capsule, from which small projections extend into the acini. In the later stages of chronic interstitial inflammation the liver is more or less diminished in size, in rare cases fully one half; its surface is uneven and covered with prominences, which vary from a millet grain in size to that of a pea, and are usually of a yellow, icteric color. At the edge of the liver, especially in front where it is sharp, single nodules are frequently found, completely isolated, as the capsule belonging to the two surfaces comes in contact here. Upon section a similar condition of things is seen in the interior of the organ.

ORGANS OF RESPIRATION.

Drunkards are very subject to catarrh of the larynx,[6] which is often accompanied by a similar condition of the pharynx.[7] This catarrhal inflammation of the larynx not unfrequently extends into the bronchi.

A very important question is whether the habitual use of alcohol predisposes to disease of the lungs. Upon this point authorities differ so widely that it is quite impossible to draw any conclusion.

THE HEART.

In habitual drunkards the heart is almost always found hypertrophied. This hypertrophy may be brought about in various ways. As is well known, the effect of alcohol is to increase the frequency and force of the pulse. Whenever a muscle is called upon to do an extra amount of work the effect is to increase the size of that muscle. This hypertrophy of the ventricular walls, which is simply the result of an increased amount of work, is also produced by various obstructions to the circulation which the heart has to overcome. Owing to the deposit of fat in and about the different organs, to the fatty infiltration of the cardiac muscle itself, the work of the heart is increased. This will also be caused by the disturbance of the pulmonary circulation, owing to bronchial catarrh, emphysema, etc., and also to disturbance of the portal circulation from fatty liver, cirrhosis, etc. Another very important factor in the cause of hypertrophy of the cardiac muscle, and especially of the left ventricle, is, according to some authorities, the condition of the kidneys frequently met with in chronic alcoholism. Here one may find fatty degeneration of the parenchyma, accompanied by an increase of interstitial connective tissue which has become more or less shrunken. According to Traube this contraction cuts off a large number of small vessels, and results in an increase of pressure in the aortic system, producing dilatation and hypertrophy of the left ventricle. This explanation is objected to by others, for instance Bamberger. Still another obstruction to the circulation is owing to the lumen of the vessels being increased, for when this occurs the blood-stream is rendered slower, and has to be overcome by increased heart's action. Finally, an atheromatous condition of the arteries is to be mentioned, as this causes a decided obstruction.

In the later stages of alcoholism a fatty degeneration of the cardiac muscle occurs, and in the very last stages, owing to the general inanition at that time, the muscle becomes atrophied and diminished in weight. The organ is pale and flabby, diminished in size in all directions.

THE VESSELS.

The change in the capillaries consists in an increase in their lumen, that of the smaller and larger arteries in the so-called atheromatous degeneration. The dilatation of the small vessels and passive hyperæmia of all the organs has been explained on the ground that the alcohol has a paralyzing effect upon the vaso-motor system; also that the alcohol, by its irritating effect upon the walls of the vessels, causes a fatty degeneration of the same, and as a consequence a loss of tonicity.

Aside from the fatty condition a sclerosis of the walls takes place, owing to hyperplasia; this may result in the so-called ossification, an infiltration of lime salts into the newly formed tissue. As a result of these conditions the vessels lose their elasticity, become hard and stiff, and thus are more resistant to the flow of blood. This chronic inflammation of the walls of the vessels which underlies this process may be brought about by the continued use of alcohol. The irritation which alcohol produces in all the tissues may be sufficient to produce inflammation of the walls of the vessels. A still more important element in the causation is the constant stretching which the walls undergo and which predisposes them to the atheromatous change. Traube attributes this degeneration in alcoholism to this, and also to the diminishing of the rapidity of the blood-stream, which occurs at the same time. He says: "The most of these cases occur in drunkards. It is not unlikely that the increased tension of the aortic system which is observed in drunkards, not only while they are under the immediate influence of liquor, is owing to a contraction of the smaller arteries, which results in an increased tension by interfering with the flow of blood from the aortic system. This being the case, the increased tension observed in the larger branches would be accompanied by a slowing of the blood-stream." The primary inflammatory condition may also be brought about by the overdistention of the smaller vessels, caused by the increased heart's action. When they have once lost their tonicity this increased action ceases. It is a well-established fact that as the quality of the blood becomes deteriorated, a condition which is a constant accompaniment of the general cachexia, the nutrition of the walls of the vessels is interfered with, and a fatty degeneration results.

---

[1] Niemeyer, Text-book of Practical Medicine.

[2] Baer, Alcohol.

[3] Niemeyer, Text-book of Practical Medicine.

[4] Orth, Diagnosis in Pathological Anatomy. Frerichs, A Clinical Treatise on Diseases of the Liver. Niemeyer, Text-book of Practical Medicine.

[5] Baer, Alcohol.

[6] Baer. Alcohol. Niemeyer, Text-book of Practical Medicine.

[7] Niemeyer, Text-book of Practical Medicine.

AFFECTIONS OF THE URINARY ORGANS.

After each ingestion of alcohol the secretion of urine is increased, as a larger quantity of water is excreted with it.

The diseases of the kidneys which most frequently occur in drunkards, and especially in the latter stages of alcoholism, are the parenchymatous and interstitial or granular nephritis. This latter is divided into two stages, that of infiltration of cellular elements, and the other of connective tissue formation. At first the inflammatory process produces an active hyperæmia, with an exudation of fluid and white blood corpuscles into the interstitial connective tissue. This in turn is productive of anæmia, impaired nutrition of the renal epithelium, and granular degeneration of the same.

If this process advances to another stage there occurs either a hyperplasia of the interstitial connective tissue or, what is more frequent, a granular condition with atrophy. The cellular elements lying between the urinary tubules become converted into masses of connective tissue, which serve to obstruct the glomeruli and tubules. The increased blood pressure in the aorta induces hypertrophy of the left ventricle, and albumen appears in large quantity in the urine, which is increased in quantity, and of low specific gravity. According to all authorities the abuse of alcohol is one of the most common causes of the granular kidney. According to Christison three fourths or four fifths of all cases of granular atrophy are induced by it.

THE NERVOUS SYSTEM.

The affections of the nervous system in drunkards are both numerous and important. No organ, with exception, perhaps, of the liver, suffers so constantly and from such a variety of lesions as the central nervous system. Many alterations in the functions are recognizable after death by a change in the tissues, but there are various affections, on the other hand, which point to a marked change in the cerebro-spinal system that cannot be detected. The very delicate and complicated structure of the nerves and ganglion cells require not only that their anatomical but also their chemical relations shall be preserved for the performance of their functions. Ever so slight a deviation in the nutritive processes produces a disproportionate disturbance in their functions; much greater than in any other tissues of the body.

THE BRAIN.

The calvarium is altered. It is increased in weight by hyperostosis and sclerosis, both the outer and inner table being thickened. The cancellated structure is more dense, owing to a concentric formation of bone about the Haversian canals. Upon the inner surface the channels of the vessels are deeper than normal as well as the depressions for the pacchionian bodies.

There is an increase in the amount of blood in the brain owing to the abnormal action of the heart and fatty or atheromatous degeneration of the walls of the small vessels, or diminished nutrition of the same, which paralyzes them so that their lumen becomes increased, and hyperæmia results. In the earlier stages of alcoholism, where alcoholic excess is relatively frequent, this hyperæmia is more of an active process, which, in the later stages, assumes a passive character when obstruction to the circulation exists in other organs, as the liver, kidneys, lungs, etc.

CEREBRAL APOPLEXY.

An effusion of blood into the brain substance frequently occurs in drunkards. All conditions brought about by the intemperate use of alcohol which tend to produce cerebral hyperæmia favor, in a marked degree, the occurrence of either large or capillary effusions.

SEROUS APOPLEXY.

An acute or chronic serous effusion into the cavity of the skull, into the brain substance, or into the membranes of the brain, and into the cavity of the arachnoid, may result from the abuse of alcohol. This transudation occurs as a complication in other cerebral diseases, and in those troubles which tend to produce hyperæmia of this organ by mechanical stasis, as in diseases of the lungs and heart. It may also result from a very watery condition of the blood, such as occurs in Bright's disease. In alcoholism the blood is poor in plastic material, and as a consequence the transudation is favored. Either an acute or chronic collection of fluid in the ventricles of the brain is not an infrequent result of drunkenness.[1]

PACHYMENINGITIS INTERNA CHRONICA.

This inflammation of the inner surface of the dura mater consists at first of a very slight layer of fibrine on the surface of the dura, from which a thin layer of connective tissue is afterwards developed, which adheres to the surface of the membrane. A second and a third layer of inflammatory exudation is then formed, and so on until there are many layers. The dura mater thus becomes materially thickened. Each one of these layers is vascular, and occasionally one of these vessels ruptures, resulting in a hæmorrhage between two of the layers. That this affection is more liable to occur in the intemperate there can be but little doubt, although it has been but seldom produced in the lower animals even after long and continued administration of alcohol.

---

[1] Hasse, Krankheiten des Nervensystems. Handbuch des Spec. Pathol. und Therap., von R. Virchow, Band 4, S. 365.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

COAGULATION NECROSIS.

THIS term was first used by Cohnheim to express a form of destruction of tissue, which had previously been recognized by Weigert, who has given a comprehensive explanation of his views in a recent article.[1] The words are intended to signify the death of a tissue or some of its elements with a coagulation of their substance.

From the earliest times the coagulation of the blood has been recognized, but it was not until within the last decade that the rôle which its cellular elements played in this process was understood. Alexander Schmidt concluded from his investigations that two substances were necessary for the completion of coagulation. One, called by him fibrinogenous, was contained in the fluid parts of the blood, the other, called fibrinoplastic, was contained in the white corpuscles. Upon the death of these cells this latter substance was set free, and, acting like a ferment upon the fibrinogenous substance, caused its solidification. Weigert carries this conception of coagulation still further, and shows that the bodies of cells of different tissues are capable of being changed into masses, which resemble coagulated fibrine in their gross appearances, and that this may occur without any exudation having taken place *outside* of the cells.

One of the earliest and only constant histological appearance which has been observed is the disappearance of the nuclei. This is best differentiated, in doubtful cases, from the results of post-mortem decomposition by an examination of the zone of tissue adjacent to such foci, which will present signs of reactive inflammation if of ante-mortem origin. In order that this loss of the nuclei should take place, it is not only necessary that the spot should be deprived of nourishment (cutting off the blood supply) and subjected to warmth and moisture, but that it should also be saturated with an abundant supply of fibrinogenous lymph. In proof of this the fact is cited of the fœtus dead within its mother, but no longer permeated by lymphatic fluid, which, although in an advanced stage of maceration, often has the nuclei of the cells in a good state of preservation.

Although the author thinks that all tissue which dies within the organism and contains coagulable material must solidify, yet there are many causes that hinder this. A very slow death may end in the entire change into fat, for example. The ætiological factor is, however, of the greatest importance in preventing coagulation. In this relation are to be considered many of the chemical and fermentative processes, especially the action of the poison now generally assumed to be associated with the introduction of bacteria. These give rise to the purulent character of the inflammation. The pus itself being not only a quantitatively increased inflammation, but having a qualitatively different character. It can be defined by saying, that in it very little fibrine is produced from the exuding cells, and that the dying tissues are liquefied instead of being coagulated.

After this general consideration of the subject the special forms of coagulation necrosis are considered, commencing with the hæmorrhagic infarction. As belonging to this class, many authors have regarded the pale, firm, fibrous looking wedges, which are found as the result emboli, and considered their white appearance as due to the decolorization of the infiltrated blood. We can, however, say that in such fibrine wedges no hæmorrhage has taken place, and that it represents solely the dead and coagulated tissue. These wedges are best studied in the kidney, where the poverty of the collateral circulation prevents an extensive infiltration with blood.

Perhaps still more typical are the infarctions of the heart. As the result of atheromatous changes in the coronary arteries a closure may result. If this occurs gradually, so that a collateral (but insufficient) circulation is established, there takes place a slow atrophy with final destruction of the muscular fibres, without any harm to the connective tissue. The fibres thus lost are replaced by a tendon-like tissue. The so-called "chronic myocarditis" is nothing but a process of this sort. If, however, the blood supply is cut off suddenly and completely, there is seen a dry yellowish spot looking like coagulated fibrine. Upon microscopic examination there is not seen here a fibrinous exudation, but an apparently normal tissue (the muscular striations often still to be recognized) entirely lacking nuclei. In the neighborhood is found a reactive accumulation of round or spindle cells.

The infarction of the spleen is similar to that of the kidney, only, from the large amount of blood normally present, it is difficult to distinguish whether fresh blood has been infiltrated or whether the original blood remains. The fibrine wedges often have a bluish red, livid color, not, however, due to a regular hæmorrhage, but to a diffusion of the blood coloring matter contained in the corpuscles originally lying in the meshes of the pulp. A casual observation leads to the conclusion that no change has taken place here in the structure of the part, but on careful inspection it is seen that the cells of the original connective tissue, the Malpighian bodies, and of the pulp, are without nuclei, and that the apparently normal blood corpuscles have entirely lost their coloring matter. But the fixed elements of the spleen are not sufficiently numerous to explain, by their coagulation, such a firm homogeneous yellow wedge. An "exudation of fibrine" is wanting; therefore it must be assumed that the red corpuscles, which form the greatest part of the tissue, must have undergone a species of coagulation after having been saturated with lymph by which their coloring matter was removed.

All these forms of coagulation necrosis preserve but for a short time the contour of their elements unchanged. These gradually lose the sharpness of their outline and become more and more indistinct. Finally, the firm wedge becomes absorbed and is replaced by a cicatrix of connective tissue, which at last may become infiltrated with lime salts.

In the infarction of the lungs there also occurs a death with enucleation and coagulation of the tissues. A decolorization of the nodule never takes place to that extent which has been observed in the case of the spleen, yet the color is diminished, and its consistency firmer when compared with nodules formed by hæmorrhages into the lung from other causes, for example after the rupture of an aneurism.

In opposition to these ischæmic necroses, in which the dead tissue undergoes a coagulation, stand those in which the necrosis undergoes a softening without the action of a liquefying ferment. Such are found exclusively in the central nervous system, and especially in the brain. This condition is explained by the fact that the brain is very poor in the material necessary to coagulate the lymph, which thus acts simply in softening the mass.

---

[1] Virchow's Arch., vol. lxxix., p. 87.

The cheesy foci of malignant tumors are in close relation with the non-hæmorrhagic form of infarction; only they often contain more fat, that can well have been formed before the coagulation has taken place. In order to account for this the vessels must be supposed to be cut off by the new growth. In like manner the cheesy degeneration of typhoid processes belongs here. In one such case a thrombus was found in an artery, the wall of which was found to have undergone change.

In this category falls also a previously unnoticed change in the so-called atheromatous disease of the aorta and its analogous syphilitic affection. Numerous foci deprived of nuclei are found in the wall, which are truly so small that their existence can only be made out from their aggregation. Often they are larger and represent exquisite cheesy or fibrinous exudations. These also occur in the new formed masses of tissue, but not exclusively; and the author assigns to them one of the chief sources of the inflammatory and hyperplastic tissue changes, which are peculiar to the atheromatous and sclerotic processes. At any rate they are not always "broken down products of inflammation" or "short-lived" new formed elements, but they often have their seat in the midst of the old tissue and show its structure. The atheromatous process in these cases would fall into line with so many other inflammatory ones, where a hyperplastic growth of connective tissue results from a primary necrosis of the specific tissue elements; and such places, it must be remembered, show a tendency to calcification.

Finally, it is to be noted that anatomically, but not ætiologically, a portion of the coagulation necrosis belongs here which is seen in the cheesifaction of tuberculosis and scrofula, and that which is found in the firm coagulations of mucous surfaces. This last is presented in true anatomical diphtheria affecting the stroma of the mucous tissue. Here we have nothing to do with a cutting off of the blood supply but with a direct killing of the tissue by a chemical or infectious agent. If the direct coagulation of the albuminous bodies has not been caused by the action of the poison, then it must be assumed as due to the coagulation of the dying tissues by the permeating lymph.

Here the territory of the coagulation necrosis of entire tissues is left, the anatomical relations of which are quite uniform. First, a loss of nuclei, the outline of the tissue being preserved, then the occurrence of an obscure, granular, or dull glancing mass, and finally calcification.

The picture presented by the coagulation necrosis of the separate tissue elements within or upon the surface of organs is more varied. There the rule holds that never when only a single kind of cell dies is it the connective tissue part that becomes necrotic. It is always the so-called specific, the parenchymatous, substance.

First, the epithelium is considered, commencing with that of the kidney. It has been found that certain chemical substances kill its epithelium, while that of the other organs of the body is spared. For example, subcutaneous injections of indigo-carmine or poisoning with potassic chromate or cantharides produce this result. Further, a temporary closure of the renal artery leads to a destruction of the cells and the formation of coagulated substances, which are either thrown off or calcified.

In the liver similar results are produced by mycotic irritants, and by the ligature of the ductus choledochus. In this case also we find epithelial flakes, which finally assume a glancing appearance recalling amyloid, and which are to be considered as coagulated.

Finally the coagulation of the epithelium of the skin is noticed. This has close affinities with the diphtheritic process, but as in the latter the connective tissue is affected at the same time it should be kept distinct. Where the epithelium is alone affected the author proposes the name of diphtheroid. The cells in like manner become flaky masses without nuclei similiar to fibrine, and dull or glancing in appearance. For the first time are here seen fibre-like markings, which are easily explained when the efflorescence of small-pox is studied. The older authors consider these markings as due to fibrine, and they were always so considered until Auspitz and Basch showed they were of epithelial origin, while Weigert shows for the first time that we have to do with a coagulation of the epithelium of the rete Malpighii, changed into a network by the penetration of the lymphatic fluid into the cells.

The waxy degeneration of the striped muscular fibres which follows a rupture of the separate fibrillæ, is also a process of the same nature.

So much for the coagulation necrosis of the tissues proper of the body. We come once more to a consideration of the white corpuscles, and thus to the fibrine coagulation in its strict sense. In this the most varied forms are presented.

The formation of fibrine can only be followed anatomically where the white cells preserve their form analogous to the tissue cells in the coagulated mass. Also the rule holds that the nuclei are preserved but for a time. In some cases, which macroscopically look exactly like fibrine (for example, in membrane of croup or white thrombi), the whole mass is formed of nucleated round cells without any amorphous fibrine lying between them. Generally, however, there are found with these cells flakes without nuclei and threadlike or granular fibrine. Here it must be supposed that a deposition or transudation of the white cells has taken place just before death.

If an opportunity is had of examining various stages of such a coagulation, it will be noticed that in some places the round cells run gradually one into the other, until finally an ill defined granular mass is the result. In other places they are changed to glancing, often highly glancing flakes, which may assume a rosary-like figure. The first form are seen in the white thrombi, in many exudations of the serous membranes, especially of the endocardium, in many forms of croup, and, finally, in the cheesy degenerations of tuberculosis and scrofula. The glancing form occurs in pseudo-diphtheritis. The author explains the occurrence of these latter forms by the fact that the leucocytes at the time of their death are so compactly arranged that they cannot be dissolved in the surrounding lymphatic stream, and must coagulate in the same manner as the tissue cells. These scales can afterwards run together and become an ill defined granular detritus. The intermediate stages between scales and fine threads can be easily explained by an insufficient dissolution of the leucocytes.

The cause of the tendency of all of these fibrine masses to calcification is wholly unknown. Looking once more over these various coagulating processes, they present very varied microscopic and macroscopic appearances. With the microscope there are found at times much finer threads than in the ordinary coagulation of the blood, at other times coarser bands than in the firm coagulation of serous exudations. Again, granular masses, as in the white thrombus, and finally the old cells have preserved their form, as in many infarctions. The glance, too, is different; the dull, lustreless, granular and scaly coagulations pass through many gradations into the waxy ("amyloid"), strongly refractive mass. The gross consistence presents essential differences. The buffy clots are very tender, elastic masses; the white thrombi brittle or somewhat coherent formations; the cheesy substance still more brittle, while the broken-down thrombi and softened cheesy foci are granular crumbling masses. The infarctions, on the contrary, are very firm and hard.

All these forms are found with great degrees of variation, and the formation of granular amorphous and glancing masses can take place from fibrine of very different origins.

If the histological agreement which these fibrine masses of different origin have is disregarded they show themselves as having the following in common: —

(1.) All are spontaneously coagulated.

(2.) All arise from cellular elements with the aid of a fluid containing fibrinogen.

(3.) All first require a death of the cell, as their subsequent history teaches.

(4.) All can associate lime salts, either quickly or slowly.

If the pathological calcification of substances is considered, the interesting result is reached — that perhaps in all a period of coagulation necrosis has gone before.

THIRST AND POLYDIPSIA.

Under this title Nothnagel[1] gives the history of a case, which seems to throw light upon the localization of the seat of the sensation of thirst, and goes further to enlarge our ideas of the relations of certain pathological processes that have for their prominent symptom an inordinate desire for fluid.

The history is as follows: —

A groom was kicked in the abdomen by a horse, and fell striking the back of his head. Although stunned, he did not lose consciousness, nor was there any vomiting. Within a half an hour from the time of the accident he commenced to have extreme thirst, and within the next three hours (at the end of which time he entered the hospital) he drank three litres of wine and beer. The first micturition followed two and a half hours after the time of the accident. At the time of entrance the pulse and temperature were normal and continued so. The pupils were much contracted but reacted to light. Pain in the back of the head, increased upon pressure, was the prominent symptom, which, however, lasted but a few days. His thirst was intense, and this persisted during his stay of eighteen days in the hospital. The amount of fluid taken varied from 2000 ccm. to 18,500 ccm., and the urine from 1100 ccm. to 13,500 ccm. in twenty-four hours, the specific gravity of the latter varying between 1020 and 1001.

The author thinks that this is an unquestionable case of true primary polydipsia, as the thirst was the first symptom noticed, the first passage of urine not taking place until two hours after this, and when a large quantity of fluid had been taken.

Aside from the injury, there was nothing in the case, as fever, diarrhœa, or vomiting, which would cause this thirst.

The nature of the injury excludes the possibility of an excitation of the peripheral ends of the nerves of the palate and fauces, which is considered by many as the cause for thirst, but points directly to a central disturbance. There were but two symptoms in the case, however, which could aid in more closely locating this "thirst centre," namely, the myosis and the severe pain in the occipital region and neck. In regard to these it must be said, that although the former is found with lesions of various localities of the brain, still it is especially noticed in disease of the posterior parts, notably of the pons and medulla. As far as the pain is of value, it certainly points to the same region rather than to the frontal or temporal. Further in support of this is the analogy of the sensation of the necessity for air (Lufthunger) which can occur in the course of disease of the medulla without the lungs being affected in any way. Moreover, allowing that the excitation of the peripheral nerves can produce this sensation, we must imagine this irritation conducted towards the centre, and finally reaching a certain point, namely, their origin, from whence it arrives at that part of the brain where the perception is appreciated. *A priori*, therefore, there appears to be no physiological difficulty why the first central station could not be excited directly, as well as in the case of the breathing centre.

The case is especially interesting from a pathological point of view upon the question of diabetes insipidus.

At the present time nearly all acknowledge that this disease stands in the closest relations with disease of the nervous system, and has nothing to do with general disease or with that of the kidneys.

The greater number think that in diabetes insipidus the polyuria is the first symptom, produced by a disturbance of the innervation of the kidneys, and the polydipsia the secondary. In most of the cases hitherto described it is impossible to determine which of the two made its appearance first, from the fact that they do not come under observation until long after the commencement of the trouble, when the exact primary sequence is shrouded in doubt. There is no doubt here, and as far as a single case can go it supports the possibility, that in other cases, with a similar ætiological factor, the polydipsia is to be considered as the primary trouble.

Further, we are placed in the position to determine the relations of the urinary secretion in a case of this sort.

In this connection it is to be noted: (1.) The secretion of urine was always less than the amount of fluid ingested, often to a considerable extent. (2.) The perspiration was in no way diminished, on the contrary was increased by an extreme amount of water. The surplus water appeared to be eliminated by the breath. (3.) If the amount of fluid was restricted, the quantity of urine immediately sank, as in a healthy individual, even below the normal, showing there is no withdrawal of water from the tissues.

---

[1] Virchow's Archiv, vol. xxxvi., page 435.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.[*]

THE MANAGEMENT OF LABOR WITH REFERENCE TO THE PREVENTION OF SUBSEQUENT UTERINE DISEASE.

At a stated meeting of the Academy, held November 2d, a paper on the above subject, written by Dr. W. E. Forest, who had been suddenly called out of town by illness in his family, was read by the assistant secretary, Dr. W. H. Katzenbach. There was an undoubted connection, the paper said, between uterine disease and parturition, and it was the testimony of gynæcologists that in from one third to one half of all the cases that came under their observation the trouble originated at this time. It was incumbent on all those who practiced in obstetrics, therefore, to consider how far the responsibility for this condition of affairs rested with them, and there could be no question whatever that a portion of such cases could be prevented by the intelligent and careful management of labor by the accoucheur.

There were two general conditions resulting from labor which were liable to give rise to subsequent uterine disease, namely, laceration of some of the pelvic tissues and subinvolution, either with or without laceration. Laceration was by far the most important, and the most important kind of laceration was that of the cervix. Dr. Emmet had found this condition in no less than one third of all his cases, and its extreme frequency was also shown by the tables prepared by Dr. Sinclair, of the Boston Lying-In Hospital. Among the causes of laceration of the cervix the first set down in the books was too rapid labor, or rather too rapid first stage of labor. Although it had the support of Emmet and other authorities, this opinion, he thought, was a mistake, and he believed that directly the opposite of rapid labor was a much more frequent cause. Dilatation was not a mechanical process, as had so often been taught, but a physiological one, and it might, perhaps, more properly be called relaxation than dilatation. In normal labor, when contraction took place at the fundus, relaxation took place at the cervix; but whenever this harmony of action was interfered with by any disturbance of nerve force the process of relaxation was retarded, and the tissues of the cervix were thereby reduced to such a condition that laceration was exceedingly apt to occur. In confirmation of the opinion that rapid labor was not a frequent cause of laceration, the statistics of the Boston Lying-In Hospital showed that out of seventy-six cases of laceration of the cervix in only three had there been a rapid labor. If, then, during the first stage of labor there was any disturbance of nerve force which rendered the dilatation of the os unsatisfactory, the accoucheur might employ some agent that would be likely to restore the normal harmony of action between the fundus and the cervix, such as chloroform, chloral, or morphia, and the judicious use of the fingers was often of great service also in accomplishing this.

Tedious labor, or rather tedious first stage of labor, was the second cause of laceration of the cervix mentioned by the authorities, and in the writer's opinion it was by far the most important. Out of thirty-seven cases tabulated by Dr. Sinclair tedious labor had occurred in no less than thirty-four. Dr. Emmet reasoned *à priori* that tedious labor was not such a frequent cause as rapid, but in opposition to this his statistics agreed substantially with those of Dr. Sinclair. It seemed to him reasonable that tedious labor should result in laceration of the cervix, because the resiliency of the tissues naturally became impaired by the long-continued pressure of the head upon them, and it was no wonder that the forcing of the latter through a ring of exhausted and œdematous tissue produced rupture. Here, again, anything that quieted the disturbed nervous action and restored the physiological equilibrium might be employed by the accoucheur, and if he used drugs like morphia and chloral it was very important to give them at the right time and in proper doses. A too large dose might simply weaken and paralyze, and probably thus render the subsequent use of the forceps necessary. Used early and in appropriate quantities, morphia and chloral were often very efficient, and a great deal could also be accomplished by gentle dilatation with the fingers. In judging of the necessity for interference more could be learned from the condition of the parts in front of the cervix than from that of the cervix itself. As labor went on the bladder and os were drawn upwards, and the anterior vaginal cul-de-sac was formed, while the urethra, which at first could be felt like a firm cord, could not be distinguished by the finger on account of the lengthening and attenuation which it had undergone. As to the causes of tedious labor, this was a very wide subject, and there was much about it which had never as yet been satisfactorily explained.

The next cause of laceration of the cervix mentioned was instrumental labor, but as the forceps were frequently resorted to in cases of tedious labor, it was impossible to say in what proportion of such lacerations the forceps, and in what the tedious labors, were responsible.

Digital examination was another cause sometimes specified. In occasional cases rough handling of the os by the accoucheur might perhaps produce laceration; but, on the other hand, intelligent digital dilatation was one of the best means at our command for preventing the accident. The time for this procedure was when the os externum was not acting in harmony with the action of the lower zone of the uterus.

The fifth cause was premature rupture of the membranes. When this occurred the process of nature was to be imitated by keeping the os well smeared with vaseline, and gentle dilatation with the fingers. It was hardly necessary to add that intentional rupture of the membranes, except in certain special cases, should always be avoided until dilatation had advanced to such a stage that there was no danger of this resulting in laceration of the cervix. He would not attempt to discuss all the causes of this accident, but among those occasionally referred to was the giving of ergot. Certainly no intelligent accoucheur, however, would think of doing such a thing at this stage of labor.

But suppose that a laceration of the cervix had taken place, notwithstanding all efforts to prevent it; what was to be done at the time? In the first place, the utmost cleanliness was to be observed, and three or four injections were to be made daily. As to the bringing of the gaping lips together, sutures were out of the question, but the writer had lately been experimenting with the use of elastic bands. By the third or fourth day he had tried slipping a rubber band over the cervix, after having brought the lips of the wound in apposition, but he was unable to say as yet whether any good was likely to result from this device or not.

The second great cause of uterine disease was subinvolution, which, however, was not so much a cause of this as a disease itself. Normal involution, it was now ascertained, took place in from twelve to twenty days, but various causes might prolong this or interrupt the process permanently. Among these was laceration of the cervix, although laceration of the perinæum did not seem to be followed by the same result unless it extended through the sphincter ani. Septicæmia was a potent cause of subinvolution, and the obstetrician was more often responsible for this than any other cause. If the utmost cleanliness was observed, and a proper use made of disinfecting agents, he believed that a very large portion of the cases of septicæmia might be avoided. It was a gratifying sign of the times, which showed a decided advance in the science of obstetrics, that the rule had been adopted at the Boston Lying-In Hospital, that a careful physical examination should be made in the case of every patient on the sixteenth day after confinement.

Among those who took part in the discussion of the paper (which was left incomplete by the writer) were Drs. Beckwith, Castle, C. C. Lee, and the president, Fordyce Barker.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

PROJECTING PROMONTORY OF THE SACRUM; VERSION; CRANIOTOMY.

March 11, 1882. Dr. C. Ellery Stedman read the case.

On Wednesday at eleven A. M. Dr. S. was sent for to the assistance of Dr. H. C. Towle, of Dorchester. The patient was a short, strong, Irish primipara, aged about twenty-five, who had been in labor under a midwife's supervision since Sunday. No progress had been made, although the pains were severe and forcing. Dr. Towle at six A. M. of Wednesday found the membranes distending the vagina, the os being fully dilated; on discharging the waters he recognized a contracted brim, the promontory of the sacrum being remarkably protuberant. The presentation was right occipito-posterior, and he determined to apply the forceps at 9.30, as the fœtal head would not engage, in spite of suitable pains. No amount of traction would make the head budge, and after manipulating and pulling till he was tired Dr. Towle sent for help. The patient had been under ether, the pulse was regular but feeble, and brandy was given subcutaneously. Dr. S. found it easy to change the presentation to the first position, and not very hard to apply the forceps over the child's ears, but there was no yielding whatever, and the sensation given to the operator was that of trying to pull a brick out of a house wall. It was next determined to resort to version. With extreme difficulty the right foot was brought into the vagina, with its toes forward; the member had to be held very tightly, or it would slip, and the apparently easy task of casting a tape around the ankle was achieved only after long trial. Traction on this had no effect whatever to alter the state of things, for the head could not be induced to retract, with all the pressure which could safely be applied; and it was necessary to seek the other foot, which was found in the fundus after alternate efforts with cramped hands of both operators. A fillet being fastened to this with great difficulty, Dr. T. drawing on the feet while the other applied external and internal pressure, the head consented to recede, and the body was born. The cranium was now jammed above the brim, the occiput to the right, and the chin hooked over the mother's left side; the child's body filled the vagina full. Efforts to push the vertex up, or engage the chin from inside or from without, were futile, as was every attempt to rotate, flex, extend, or draw. It was obvious that the head could not come through whole; the occiput was accordingly pierced with Smellie's scissors, the feeble pulsation of the cord having ceased, in two or three places, the skull well broken, and the brain lacerated. First the sharp hook was tried without success; then the blunt hook, passed through the perforation and brought out by the mouth, failed, in spite of the firm hold and every kind of rotation and traction. Both attendants being now thoroughly tired, the aid of Dr. Bolles was requested. With no little inconvenience to himself he cheerfully answered the call. The patient had had some strong pains in the half hour's interval, but neither physician could see that the position was altered. Dr. Bolles, passing the blunt hook through the perforation, backwards, succeeded in rotating and delivering the head. The placenta followed, without hæmorrhage; the perinæum, which had suffered during the prolonged manipulations, was repaired by Dr. Towle with silver sutures; the patient, given ergot subcutaneously, and forty drops of laudanum by the mouth, was made comfortable in bed.

The proper treatment of this case after the forceps had failed was craniotomy, but the patient being a Roman Catholic it could not be permitted unless the child were affirmed to be dead, and this was not certain till the cord was reached. Besides, the speaker had found it preferable to perforate the skull through the occiput after turning.

Dr. Fifield said that years ago he was familiar with operations where craniotomy was needed, but that he had not performed it for a long time. In such a case as that described by Dr. Stedman it was proper to perforate without attempting version. When forced to perform craniotomy, especially after version, he recognized the folly of the usual directions for the application of the sharp or blunt hook. He had always been taught that it was proper to bring down the forehead past the promontory of the sacrum; sometimes taught that the blunt hook can be got into the mouth, — foolish, because the jaw easily gives way. On the contrary, he had recognized the importance of not letting the forehead slip past the promontory of the sacrum, but to make the occiput pass the pubes. There was danger when directing the point of the sharp hook towards the bladder. The amount of force that could be used when the head was high up was sometimes enormous. This winter he had been called to see a case where the membranes had been ruptured, the head was high up, and the pains feeble during the preceding night. On the following noon, with the assistance of Dr. Cushing, the presentation was made out by the whole hand in the vagina, and the head was found in the position described by Dr. Stedman. Dr. Fifield could not make an application of the forceps, and the woman was left to herself at two P. M. At

5.30 o'clock Dr. Fifield again saw her, but found no change. The forceps were again essayed, but would not lock. The patient was then etherized, and the hand, carried high up, discovered an advanced promontory of the sacrum, and an ear was detected; a blade of the forceps was then passed up, and while this was in position the other blade was slid along, and the two were at length locked. Dr. Fifield's own strength at the forceps proved to be of no avail. A jack-towel was then made fast to the handles and drawn upon by the husband, seated behind the chief operator, and by the combined strength of the two a living child was delivered, with a deeply indented head. Dr. Fifield said he had never before applied the forceps so high through so small an os, and his success was attended with great difficulty, aided by good fortune.

DR. STEDMAN remarked that he did not know how Dr. Bolles got the occiput down. He had turned the hook towards the mother's right side, while Dr. Stedman had turned it towards the left; but every known expedient had been already tried; the fresh hand was at once successful.

DR. FIFIELD replied to a question that the patient was fixed on the right side, a big stout woman having both arms around the patient's thigh.

DR. BOARDMAN asked Dr. Stedman why he would not affirm that the child was dead, and so do the operation at once, and what would decide him to perform craniotomy without delay.

DR. STEDMAN agreed that it would have been better to do craniotomy earlier, but that it was necessary to be certain as to the child's death on behalf of both friends and physician. The fact of death was decided by getting hold of the cord. In a case at his own disposal he would have no hesitation in sacrificing the child for the benefit of the mother.

In answer to a question **DR. FIFIELD** said the occiput was brought under the pubes; the sharp hook was applied with the hook forwards, and traction made directly downwards and forwards.

DR. STEDMAN stated that there were certain advantages in craniotomy after version. There was the better hold of the child; if the head were fast and presenting, it was difficult to get hold of it. He had succeeded best with the hook caught over the angle of the jaw and turned inwards; if outwards, there was always anxiety lest the mother be injured.

DR. BOARDMAN remarked that it was not general here to use the trephine and cranioclast. He was satisfied that with the two the procedure was far the better one.

DR. STEDMAN agreed that it was a very superior way of doing the work. In the case where Dr. Cushing had helped him he had used Braun's trephine, and it had worked beautifully. Dr. Cushing objected to the round hole which would show after the operation, but it did not show as such, or conspicuously, although the trephine was applied directly to the scalp.

DR. ABBOT observed, in regard to Dr. Fifield's method of traction, that he had also had occasion to employ the same method with counter-extension by two men in a case in which it took an hour to bring the child into the world. In this instance there was a contracted pelvis and a large child, which was dead. In previous labors, with one exception, no artificial aid either by turning or forceps had been required; bad symptoms followed.

At this point **DR. BLAKE** said that in a discussion at a previous meeting, to which Dr. Fifield had alluded, it was stated that the broad ligament was not free from the occurrence of cysts which might become purulent. As to primary abscess there, it was very difficult to determine the point of a beginning.

DR. FIFIELD agreed that cysts of the broad ligament were rare things, — were known as we know cysts of the ovary, — but averred that the cases spoken of that evening were inflammatory diseases, developed after delivery.

DR. BLAKE said he had reported that night a sanguineous cyst of the broad ligament, which at the second tapping had become quite purulent.

DR. FIFIELD said he had never read or heard of a sanguineous cyst of the broad ligament. There might as well be a lymphatic exudation as anything else. It was not always pus that was got from a pelvic inflammation. In Dr. Blake's case there was no post mortem to demonstrate the locality; as the disease followed labor, the indications would be towards pelvic cellulitis.

DR. BLAKE stated that he arrived at his diagnosis by exclusion.

DR. BOARDMAN observed that the dissection by French anatomists as read by Dr. Fifield gave ground for the possibility of belief in abscess of the broad ligament. He was reminded of a case of malignant disease in the upper part of the uterus. The patient had abscess of the broad ligament, as large as an English walnut, presenting a movable tumor in the exact location of the ligament, and causing intense suffering. If such an abscess were possible from malignant disease, it might occur as well in other cases.

DR. LYMAN remarked that it was pretty well agreed among the authorities that primary abscess of the broad ligament is rare. The amount of cellular tissue in the central part of the uterus, front and back, is very small, but at the sides of the uterus is a triangular space inclosing a considerable amount of such tissue. Thus, extension of cellulitis might easily, so far as can be seen, separate the layers of the broad ligament, and permit secondary purulent collections.

DR. FIFIELD said that at one of the London Societies there had been a good deal of discussion as to the relative position of the broad ligament and the Fallopian tube.

DR. SINCLAIR remarked that after all said and done the small cavities we have so much talked about might become large ones under phlegmonous inflammation, like the felon of the thumb, and that we did not know much yet of the fasciæ of the pelvis except in the most confused way, and that until our notions were thoroughly clear as to anatomical relations we could have no definite conceptions of the possibilities in the variations of the locality and course of inflammations of the pelvis. Dr. Sinclair averred that not one man in a hundred had any except the most general idea on this subject.

DR. LYMAN observed that cases of both pelvic peritonitis and cellulitis were quite common; clinically speaking, the differentiation was often impossible where the cases were not seen in the very early stages.

DR. FIFIELD remarked that the pelvic fasciæ had been very well understood in *man* since the time of Charles Bell, and that the pelvic fasciæ in general were not especially obscure. He said that there was no layer of tissue at all between the folds of the broad ligament; if this were true, — and of this there could be no reasonable doubt, — then original abscess there was impossible.

DR. LYMAN said that there was one word which he wished could be obliterated from anatomical language, and that was the word "cavity;" for, as applied to the hollow viscera, there was no such thing. He quite agreed with Dr. Sinclair that there were very few general practitioners who knew anatomy thoroughly. Professed surgeons, even, about to perform an unusual operation, got up their knowledge of the part minutely for the occasion. Dr. Lyman said he could not agree to Dr. Fifield's statements in regard to the anatomy of the broad ligament, and he should be sorry to think that there was such entire ignorance of the anatomy of the pelvis on the part of the general practitioner as had been asserted to exist.

DR. BLAKE observed that, while it was desirable to have a clear knowledge of minute anatomy, it was not in these days a practical matter as affecting treatment. He did not see why a suppuration should not extend into the broad ligament from the neighboring parts.

DR. FIFIELD replied that that was a *petitio principii*, that it did make all the difference in the world, and that an anatomical knowledge would add boldness and certainty to treatment.

DR. BLAKE rejoined that medical attendants are not materially deterred from a correct course by the want of a minute anatomical knowledge.

DR. LYMAN said he wished to add his confirmation to Dr. Blake's position. Every case of pelvic effusion had to be watched, and when pus was found it was to be evacuated. The late Dr. Brickell, of New Orleans, would even go so far as to withdraw serous effusions. Many distinguished authorities thought it was better to let the accumulation alone, and wait spontaneous evacuation, at any rate, unless the diagnosis was absolute. Dr. Lyman thought this to be a mistake, and that it would be better for the patients to aspirate too early than too late, where fluctuation was doubtful. The minute anatomy in these cases had little to do with the duty of the moment.

RENAL TROUBLE IN A MULTIPARA COMPLICATED WITH BLINDNESS.

DR. SINCLAIR reported the case of a lady, six months pregnant, whom he saw two weeks before the meeting. She was then complaining of blurred vision following very severe headache. After these had passed off she felt as well as usual, until two nights previous to the meeting, when, from twelve to three o'clock, she suffered very much from headache again, and complained of not seeing the light. She was, in fact, totally blind. That state of things, with vomiting, existed upon the doctor's arrival. The urine upon being boiled deposited half its bulk of coagulated albumen, and the patient was becoming very heavy with a threatening of coma. Cathartics had no effect until aided by croton oil, which cleared the patient's brain somewhat. Delivery by manual dilatation was accomplished in one hour and five minutes, forty-eight hours before the meeting. The eyesight had not yet returned. The patient was a multipara, and had given birth to her second child eleven years previously. The actual condition of the eyes, in the absence of an ophthalmoscopic examination, could not be definitely stated. The blindness was perfectly uniform.

DR. FORSTER said that five or six years ago Dr. Williams published an article on the subject in the Boston Medical and Surgical Journal, shortly before which Dr. Forster had had a case similar to that described by Dr. Sinclair. There was that blindness for two or three days. Dr. Wadsworth made an ophthalmoscopic examination, and found nothing abnormal. The patient complained of severe headache.

DR. BLAKE said that twenty-three years ago Dr. S. Hay and some others drew attention to the relation of Bright's disease and an affection of the retina.

DR. ABBOT reported that he had seen almost total blindness in a case of the albuminuria of pregnancy, coming on immediately after a miscarriage at the seventh month. It was not until the fourth day after that the patient was able to distinguish his features while standing by the bedside. The circumstances of the case made an ophthalmoscopic examination impracticable.

◆

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

BY MAURICE H. RICHARDSON, M. D., SECRETARY.

MARCH 20, 1882. **DR. LANGMAID** in the chair.

The regular paper of the evening was by **DR. PAGE**, on the

PERMANENCY OF THE REST TREATMENT.[1]

DR. WELLS asked what amount of uterine trouble was found in the cases reported.

DR. PAGE replied that though many come thinking they had some uterine disease he often finds them mistaken. Unless they have some organic disease or displacement (in which case they are excluded from the asylum), he pays no attention to their complaints, but proceeds to build them up.

DR. WELLS asked the question because in many such cases there has been uterine trouble. It is well known that such women are often broken down and suffer from nervous exhaustion.

DR. CHANNING remarked that in a recent number of the *Nineteenth Century* magazine *worry* was pronounced the cause of nervous exhaustion, rather than overwork. There was too much worry rather than too much work.

In reply to Dr. Lawrence, **DR. PAGE** said that overfeeding is prescribed in probably the majority of cases where the patients are broken down, ill-fed, and anæmic.

DR. DRIVER asked whether Dr. Page had had any experience with this treatment applied to men. It is well known that overworked men are subject to exhaustion. He had had the same thing himself. He had never known of a man that had been put to bed, rubbed, and fed.

DR. PAGE said that men are not admitted to the asylum on account of want of funds. He had seen a few cases in consultation. One case, a young man of twenty-two, had most of the symptoms found in women. Masturbation was the supposed cause. He was put to bed, overfed, given electricity, and ultimately got well. Dr. Page's experience with men has been very limited, however.

DR. DRIVER asked also whether the reader had ever known or heard of a case like those reported where the disease went on and developed mania, which might have been prevented by treatment.

DR. PAGE, in reply, stated that he had known of such a thing happening. Among others, a young lady who had become broken down, suffering from nervous exhaustion, finally was sent to an insane asylum. Dr. Webber saw these cases. He thought all his cases had been saved from insanity by their removal from the excitement and disturbing influences at home.

---

[1] See No. 4, page 77, of this volume of the JOURNAL.

Dr. Webber said he was very much interested in the paper, and thought it a very careful and judicious statement of the advantages of this method of conducting treatment. He thought Dr. Weir Mitchell, in his first proposal of the plan, did not make the period of rest in bed long enough. It is necessary to keep the patient in bed longer than is generally supposed. Some years ago he had had a case of nervous exhaustion that had become advanced to a state of extreme mental disturbance, though not to insanity. The patient had got to be very irritable, and could not stay in bed. Dr. Webber declining to see her unless she would stay in bed, she remained in bed three months. Then it was necessary to begin very carefully in getting her up. This is a point where there is a possibility of making a mistake, — in getting up too soon. This was some four years ago, and she is now perfectly well. The last he heard of her she went to dances, and stayed up he knew not how late. Though slow in progress, recovery was rapid after she began to stay in bed, and there has been a steady improvement from that time to this. With regard to relapses, it seemed to him that if the patients get back to exactly the same surroundings, to the same amount of work and worry, they will break down again, and that very soon. This patient was a school-teacher, and the history dated back to an attack of diphtheria. She had a school of fifty to sixty pupils, and gave private lessons in mathematics outside. She will probably not be able ever to do the same thing again, though she is able to take part in household affairs. This case is a good instance of recovery.

Dr. Webber spoke also of a woman who, after an attack of slight sickness, was left in a weak condition. On first seeing her she was in much excitement. Her eyes were wild, as in cases where there is loss of mental balance. She said she had the idea that she must continually move the furniture about. She did, in fact, change about the furniture all the time, "to keep up her strength." With exception of three or four hours' sleep, she had had none for four nights. She seemed certain to develop insanity if she should keep on without sleep. Appetite poor, and she ate very little. Dr. Webber did not think it desirable or wise to send her to bed and keep her there. A good night's sleep with chloral and bromide was followed by an improvement of appetite and a great change in her appearance in the course of the next three or four days. She lost her wild look, and was much more quiet. The only rest required was that, after rising and dressing, she should lie down on the lounge or the bed. She was allowed to sit up to meals and to see one person a day.

Confinement to bed, though not always necessary, in severe cases is absolutely so. It is there that the difficulty arises in most cases. It seems sometimes almost impossible to make them stay in bed, and some patients fail of recovery because of their unwillingness to obey orders in this respect.

It is difficult sometimes to make the friends or even the physician understand the importance of this advice. The massage treatment is excellent. He was glad to hear Dr. Page speak of it as he did, and recommend it.

With regard to the use of milk, Dr. Webber found it of advantage to add to it a few grains of bicarbonate of potash, and also a little salt, to suit the taste. The object of the bicarbonate of potash is to change the character of the coagula which is formed by the milk, so that it is less tenacious and less heavy than when the clear milk is acted on by the gastric juice. The addition of the salt takes away the fresh taste which to many patients is not agreeable. A few patients, after taking milk a longer or shorter time, become disgusted with it, even when having other diet, and are obliged to give it up on that account.

Dr. Ingalls indorsed Dr. Webber's statement of the difficulty in making patients go to bed. A great many cases come up in our practice which would be benefited if they would follow our directions. For various reasons, however, they either won't or can't.

Dr. Wells, in answer to Dr. Driver's question, said that he met last year a man of forty-five with symptoms of neurasthenia. He was a gardener about here, who was discharged, and went to his home in Maine and worried himself to death. He had symptoms similar to those in females.

Dr. Channing said he had seen a case of mild melancholia with symptoms of nervous exhaustion in a man, where Weir Mitchell's treatment had been carried out very faithfully for a long time. The patient's condition changed very little.

Dr. Driver said that it seemed to him, in these cases of nervous exhaustion occurring in men, that a trip to Europe was the worst thing to be advised. Some treatment like that described by Dr. Page would, he thought, be much more rational.

Dr. Langmaid said he thought the cases very interesting, and to one who has tried this treatment it must seem very important. No doubt, in many of the cases which do not succeed with this method of treatment the necessary measures are not rigidly enforced. Then, in the treatment, certainly more than one factor is necessary; and it is very difficult to carry out the details, — seclusion of patient, exclusion of friends, husband, relatives. With regard to the exclusion of patients with uterine diseases from the Adams Nervine Asylum, it seemed to him that possibly some of the uterine troubles are dependent on neurasthenia; for example, if cases of relaxation of the structures which support the uterus, cases which have been distinguished from true flexion, were admitted, it seemed to him that the uterine troubles would disappear; so that he wondered if some injury is not done by the exclusion of this class of cases.

Dr. Langmaid wondered how far this treatment, in which he was much interested, could be carried out in the *degenerative diseases*.

April 3d. **Dr. Jelly** in the chair.

Dr. E. L. Parks read a paper on the subject

AN ANALYSIS OF SOME CASES OF EXCISIONS,

of which the following is an abstract: —

Twenty-one cases of excision of large joints, done at Children's Hospital, Philadelphia, by his friends the late H. Lenox Hodge and John Ashhurst, Jr. The reader assisted in many of these operations, prepared the parts excised for preservation, and under the supervision of the surgeons conducted the after-treatment. The paper is based on two papers read before the College of Physicians by Dr. Ashhurst on the operative and conservative surgery of the large joints, namely, I. Excision of the Elbow, II. Excision of the Knee and Amputation of the Thigh for Disease of the Knee-Joint; on the hospital record, and his private notes.

All of these cases may be fairly classed as operations for diseased joints, the only one which may be possibly considered traumatic being that of an elbow diseased from injury six months previously.

In view of tabulating the results, the case of C. G., where *both* hips were excised in the same patient, is classed as *one* case. An excellent result was obtained, the patient walking well with the help of canes.

The cases may be divided as follows: hip, seven; knee, seven; elbow, six; ankle, one.

Results. Deaths, two: (1.) A boy, seven years old; hip excised; death eleven days later. (2.) Boy, seven years old; knee excised; death two days later, with symptoms of heart clot.

Cured, twelve; improved, seven; mortality, 9.5 per cent.

The reader referred to the case of Fred. G., thirteen years old, with extensive disease of knee-joint. Here amputation of the thigh was preferred to excision of knee, because it would have been necessary to remove tibia as far down as to below the tubercle, whereas in Dr. Ashhurst's experience the remaining column of support would not have been sufficiently strong.

In all the excisions of the elbow the single long longitudinal incision — the original operation of Mr. Parks — was adopted, between the inner condyle and olecranon, and close to the latter, to avoid ulnar nerve. The precept of Dr. Hodge was quoted, "If the sheath of the nerve is seen it is wounded."

Lead was the favorite material for sutures in these operations.

In excisions of hip and knee Ashhurst's rule is never to operate before five years of age, — with regard to future growth of limb, — if operation can be deferred.

T. Holmes holds that excision is a graver operation than the corresponding amputation. Ashhurst holds the same. Barwell quotes Holmes, and attempts by statistics to support the opposite opinion. Of course the cases quoted were properly selected as suitable for excision. While the reader recognized the gravity of the operation, he warmly commended it as one of the triumphs of conservative surgery, and especially adapted to children.

As relating to the subject the reader reported a case of his own, where, in his opinion and that of others better able to judge, life might have been saved by timely operative interference. J. L., a woman twenty-nine years old, extremely weak and emaciated, with seven suppurating sinuses in the neighborhood of hip, one of them running nearly vertically between the labium majus and thigh. Joint anchylosed by firm fibrous adhesions. When a child, in Pottsville, Penn., she had been run over by a carriage, since which she had always had disease of the hip. Dr. Harrison Allen having seen her with me in consultation, it was decided that excision was demanded to save life. It was proposed to remove the head of femur and carious portions of acetabulum. The alternative was clearly explained to her, but she refused operation. She was subsequently seen independently by Dr. W. W. Keen, and he came to the same conclusion that I, with the valuable counsel of Dr. Allen, had done. He urged her to submit to operation as her last forlorn hope. It is not strange that a woman exhausted by years of suffering should have wanted the resolution to submit to so grave an operation.

DR. H. C. HAVEN asked if it is not necessary to immobilize not only the joint affected, but also the joint above and below. If this can be done, it seemed to him it would be of great advantage. For example, if there is any movement in the hip, there must be also more or less movement in the knee itself. With the apparatus described by Dr. Parks, or the splint used at the Massachusetts General Hospital, there must be more or less motion in the hip, and therefore in the knee itself.

DR. PARKS remarked that there seems to be a difference of opinion with regard to the after-treatment of excisions of the elbow.

Holmes recommends that the arm be bound and kept in position three weeks.

Ashhurst at first kept the arm in a fixed position three weeks, but finally came down to one.

Hodge laid the limb on the least possible pretext of a splint, and kept it there till hæmorrhage had stopped, when he left it on a pillow. There was no fear of flail-like motion in the joint, later.

Recent Literature.

A Clinical Hand-Book on the Diseases of Women. By W. SYMINGTON BROWN, M. D. New York: Wm. Wood & Co. 1882.

The author of this little hand-book states in his preface that it is intended as "a practical guide on most of the diseases peculiar to women, for the use of medical students and country practitioners." It certainly covers a great deal of ground, and in that respect will undoubtedly prove a useful book of reference. Whether the author has gone enough into detail in the way of symptomatology and differential diagnosis to make the work of real value, time will show. We are inclined to think a little fuller consideration of the more important subjects would have been a great gain. Two pages devoted to pelvic peritonitis and cellulitis, and seven to displacements of the uterus, hardly admit of very much more than the barest statement of the most obvious facts.

The author evidently does not lay claim to much originality either in the matter presented or the manner of presenting it. The parts where he most often gives his own views, namely, those devoted to the treatment of the various affections, are the best. Taken as a whole, it can do no harm, and may meet a felt want. The faults are rather those of omission than of commission.

Questions on Human Anatomy. By SAMUEL O. L. POTTER, M. A., M. D., with sixty-three illustrations. Philadelphia: P. Blakiston, Sons & Co. 1882.

This is a small illustrated compendium of anatomy in the interrogative.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 16, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE RELATION OF HOSPITALS TO MEDICAL EDUCATION AND OF HOSPITAL TRUSTEES TO THE MEDICAL STAFF.

We presume that honest differences of opinion will always exisit, with regard to hospital management, between those persons to whom hospitals are chiefly important as means of promoting medical education and medical science, and those to whom they stand as one of a family of charities which the community is interested in administering justly and on uniform principles; in other words, between boards of trustees on the one hand and teachers in medical colleges on the other.

But while such differences are doubtless inevitable to some extent, it is certainly of the highest importance, for the sake of the efficiency of the hospital, that every means should be used to obliterate and lessen them.

Among the influences which would tend toward this end we will speak briefly of two which strike us as particularly important.

In the first place it would be an excellent thing if the medical boards and the boards of trustees of hospitals could meet together regularly, and much oftener than is now the case, for consultation and discussion. From meetings of this kind several good results might be expected to flow. The trustees on their part would receive valuable suggestions from time to time, — not such as would otherwise be made the subject of formal communications, but with regard to little matters of personal experience which conversation alone would bring to light.

Next, and most important point of all, misunderstandings would be rendered less frequent by such a course.

When such boards develop their opinions apart from each other, communicating only at rare intervals, and perhaps only by informal interviews of individual members of the two boards, or when these opinions are received at second hand by those to whom they should come most directly, the flavor which is given with them is apt to be one of heat and exaggeration, and in the end neither side feels that it has been fairly represented. In this way a suspicion of hostile animus often arises, which an earlier and more frequent interchange of views would have prevented or dispelled. Another means through which greater unanimity of opinion could be arrived at between trustees and medical boards is that all concerned should recognize that the theory of hospital management, like the theory of school teaching, is a subject deserving of more serious study than it has as yet received among us.

This is recognized to some extent, yet not sufficiently, as is shown by the fact that the various hospitals of the country differ materially in their methods of administration, and that the desire for change is so often manifest.

Witness, for example, the modifications in sentiment and opinion which the study of insane asylums has developed within the past few years, and the recent and interesting steps which have led to the placing of one of the surgical hospitals of New York under the exclusive control of a single physician (Dr. Sands).

In the good old times when it was thought that the "veil of ignorance" could only be lifted by the rod, or even in the more modern days of persistent memorizing, what sturdy school-master would have believed that there were enough doubts possible about the best methods of teaching to furnish food for lectures and journals devoted to pedagogy. Yet as a consequence of all this study, schools, both public and private, are now falling into line, and are adopting uniform methods, while hospitals, taking the small and large ones together, still differ greatly in their policy.

So far as these differences are the result of conviction, or of temperament moulded by study, we have nothing to say against them; but if a hospital is relatively inefficient because its founder, or its trustees, or its physicians are not possessed of the best current knowledge on the subject of hospital management, the fact is unfortunate in proportion as it is remediable, and the remedy is constant discussion of the questions involved — in which trustees as well as physicians might profitably take part. Such a discussion has been urged for some years past — especially in New York, though Boston has also taken part in it, — on the subject of asylum reform, and in spite of some extravagances on the one part and a good deal of passive opposition on the other, the results are coming slowly to light in the form of better appointments to the medical posts, and a diminished use of mechanical restraint.

Among other questions relating to the management of our general hospitals we should like to see the matter of their relation to medical education thoroughly ventilated, and will ourselves offer the following brief suggestions: —

It may be assumed that every good hospital, whatever its charter may specify, is by its very nature and its opportunities for usefulness bound to recognize three sets of duties: First, to the patients under its charge; second, to the community, to avoid, so far as possible, the danger of pauperizing the poorer classes; third, to the cause of medical science and education.

How would its position with regard to these various duties be affected if its connection with medical colleges should become even more intimate than at present? A feeling certainly exists, to some extent, that, under these circumstances, its patients would be less well cared for; partly by reason of the additional fatigue entailed by examinations before or by the students; partly because, it is thought, the hospital would lose its homelike character, and the physicians in charge their feeling of personal interest in its inmates, regarding them in the odious light of "material" for teaching. The indifference supposed to be displayed towards patients, as men and women, in some of the foreign hospitals, is cited as a case in point.

We have no desire to scout this opinion though we do not share it.

The German will always be German and the Frenchman French in their treatment of their fellowmen, within or without the hospital, but we believe that hospital patients, as a body, have cause to complain of no mal-treatment at the hands of clinical teachers, which is not many times made up to them in the increased study and attention which their cases receive.

Kind treatment and good nursing, directed by good sense, are excellent and indispensable things, and never to be thrown into the background; but it is not to be thought that they can take the place of laborious research, directed by familiarity with the pathology and chemistry and physiology which we physicians are at such expense and pains to acquire.

It is the spirit which tends in this direction that is fostered by the stimulus of teaching and publishing; it is the fruits of this study that the patients have a right to expect in our best hospitals, and if they do not find it, they have there a just cause for grievance. The principles involved in this matter were well set down in an editorial in the London *Times* of some few months ago, apropos of a request for subscriptions towards the support of St. George's Hospital. It was then urged that it would be well for the sick poor if the many small endowed hospitals for special diseases throughout the city could be swept away, and their funds turned into the treasuries of the great teaching hospitals; that the increased attention and study which their cases receive in the latter far more than overbalances the occasional injury done by a thoughtless student, or a too-scientific doctor.

If we look beyond the influence of the hospital upon the patients actually treated there, and consider what is accomplished for many others outside the hospital at the hands of the physicians whom it has trained, a far broader view of its usefulness is obtained. Let any one compute the number of persons taken care of by the physicians who graduate each year at our colleges, and who have been trained in our hospitals, and he will gain an idea of the magnitude of the indirect benefits which these hospitals confer upon the community.

Again, the prospect of first-rate opportunities for teaching and investigating not only stimulates to good work, but it attracts men of ability who might otherwise turn their attentions elsewhere.

It may appear unnecessary to present such facts as these at all, but patent as they seem — perhaps, indeed, because they are so patent — we are convinced that many intelligent laymen and even physicians have excused themselves from recognizing *to what extent* they are true, and *to what extent* it is worth while to make real sacrifices in order to secure this intimate connection between hospitals and medical schools, which is, on the whole, so beneficial to both, and to the community at large.

We are partly prompted to this statement by hearing that the Trustees of the Massachusetts General Hospital have recently been considering, and have reported unfavorably upon, a request made by a portion of the Out-Patient staff, that increased facilities for teaching should be given to certain of the departments.

It will be remembered that, as the result of an inquiry made about two years ago, an officer was appointed to investigate at the door of the hospital all out-patients presenting themselves for treatment, and to refuse admission to those who were able to pay for treatment. The adoption of these rules recommended itself at the time quite generally, as a step towards the removal of a recognized abuse; it now appears that through them the clinical facilities of the special departments were considerably impaired, mainly by keep, ing away a number of patients of the better class, and including many rare cases, who had been in the habit of coming, as it were, for consultation, often with, or sent by, their physicians.

We are not in a position to enter into the details of the questions involved, or to express a decided opinion upon their merits. We desire only to maintain that they should be discussed in the light of such considerations as those which we have presented above. If, as we believe, the opportunities for usefulness of the hospital in the way of education are so great, it becomes a problem to be decided by quantitative comparison whether or not any crippling of these opportunities is counterbalanced by a gain in another direction. Perhaps, in the instance in hand, this may be the case, but one point occurs to us as worthy of consideration before a just decision can be reached.

The chief though not the only motive by which the hospital trustees were probably animated in framing the rules alluded to, was to unite with the other charitable societies of the city in a very laudable attempt to prevent the demoralization of the poor by breaking up their habit of depending on the riches of their neighbors for support.

How far has this result been accomplished, and how far can it be accomplished, where the work of the hospital is concerned?

The persons presenting themselves at dispensaries for out-door relief may be divided, broadly, into three classes: those who are entirely unable to take care of themselves without charitable aid; those who can take care of themselves if stimulated to greater thrift; and the relatively well-to-do class who rarely or never ask for charity except in this form.

It is now distinctly the members of the second of these three classes, and only they, that are objects of solicitude to the general charitable societies of the city. Unable to meet all their ordinary expenses without great effort, if at all, they are in real danger of losing their sense of independence, and becoming more and more dependent on the community for support. Yet these persons are admitted freely to the out-patient department, and it is clear that reasons of humanity will require that this should be done until they shall have learned to take care of themselves.

On the other hand, the third class is not made up of persons who are in danger of becoming pauperized, in the ordinary sense of that term, since they rarely ask for charity under any other form than this. Yet this is the class which is excluded, and, as it seems, to the detriment of the educational usefulness of the hospital.

The step taken by the trustees two years ago was certainly a just and proper one, in itself considered; and the only question is whether the good which it secured is or is not overbalanced by the harm which it is thought to have entailed.

One class is admitted in the interests of humanity, should the other class be admitted in the interests of education?

The argument in behalf of educational claims should, it may by some be thought, receive all the more serious attention, for the reason that it does not immediately appeal to the sympathies of any large number of persons.

BOSTON WATER AND THE WATER COMMISSION AGAIN.

We learn that the question of the water-supply of Boston and the Water Commission at present sitting for its investigation were again the subject of discussion at a meeting of the physicians of the city. Last week we commented on the vote passed at a meeting of the Society for Medical Observation; this week we have to record the action of the Section of the Suffolk District Branch of the Massachusetts Medical Society whose province is Clinical Medicine and Hygiene. Dr. H. I. Bowditch, in the course of some remarks on the subject, spoke of the unwholesome condition of the present supply; he had no doubt it was sometimes the actual cause of disease, and in a far greater degree a very powerful accessory to other unfavorable influences in producing sickness. The following votes were unanimously passed at the meeting: —

> *Voted*, That the members of the Clinical Section of the Suffolk District Branch of the Massachusetts Medical Society convey through their secretary to the Water Commission lately appointed by the mayor of Boston their appreciation of the extreme importance to the inhabitants of the city of the questions which the Commission was expected to investigate.
>
> *Voted*, That as practicing physicians of the city of Boston we express to the Commission the earnest hope that it will not adjourn without a thorough and careful consideration of the whole question of the city's water supply, nor without making some suggestion for future action in the premises which may offer a reasonable hope of providing pure water, and of protecting the citizens against a recurrence of the annoyances of the past.

It is evidently the opinion of the physicians of Boston that the condition of the water during the past year has been the source of something more than discomfort, that a water saturated with so large an amount of decaying vegetable matter may easily encourage indirectly a variety of digestive derangements, especially in those otherwise in feeble health. It also seems to be the opinion of these physicians, an opinion apparently shared by many of their fellow-citizens, that a commission, even if unpaid, should not be a mere matter of form. The water has certainly been better since the Commission has been sitting, and though not superstitious we are grateful for this much.

It may be that the assiduous attendance of the Water Board upon the sittings of the Commission will be blessed to the community in due time and shape.

MEDICAL NOTES.

— Dr. Wm. B. Carpenter, F. R. S., of London, is in Boston delivering two courses of lectures before the Lowell Institute.

— It is reported that the trustees of the Johns Hopkins Hospital intends to open that institution and the medical school to be connected with it in the fall of 1883.

— The epidemic of typhoid fever in Paris this year has been quite extensive, though not especially fatal. Up to the second week in October there had been 2074 cases in the hospitals alone. In the two days, October 11th and 12th, 283 cases of the disease were received in the various hospitals. The deaths in the last week of September and the first of October were 57 and 134 respectively, as against 21 and 27 in the corresponding weeks of last year.

NEW YORK.

— The public inauguration of the New York Post-Graduate Medical School took place at Chickering Hall on Saturday evening, November 4th, and the exercises were largely attended. Prof. Wm. A. Hammond presided, and made some introductory remarks, after which Prof. D. B. St. John Roosa, the President of the Faculty, delivered the formal address of the evening. During the course of it he said that the purpose of the school was not to make more doctors, but to improve those we had. It was to afford the facilities which would enable the graduate in medicine to fit himself for the diagnosis and treatment of diseases which were not fully discussed in the studies and lectures of the ordinary course of three years in a New York Medical College. The need of these supplementary courses was too evident to require explanation, and it was a disgrace to the city that the subject had been so long neglected, as well as that to-day the friends of the movement had to make the beginning with such a pitiful supply of funds. The richest city in America ought certainly to have the public spirit and the intelligence to set this new school on a solid footing, so that it might compete with similar institutions in Paris, Vienna, and London. In Boston no rich man could be properly buried who had not left something to Harvard College, the Medical School, a hospital, or the School of Technology; but in New York half a dozen men, with money enough to endow Columbia College and the University, besides creating a thousand free beds in a hospital, died in one year, and did not mention New York in their wills. Circumstances over which the promoters of the movement had no control had compelled them to add another unendowed school of medicine to those already in existence, but they had no idea that it would remain so. When they had demonstrated their usefulness and the necessity, they would seek an endowment at the hands of their fellow-citizens. They believed that they should see the day when New York would first nourish her own children before she was generous to others. They also believed that the governing bodies of the universities would yet make them so in fact as well as in name, that the medical colleges would become an actual part of them, and that then the Post-Graduate Medical School would have its appropriate place in the third and fourth years of study. Not division, not separation, but unity in university instruction was what they sought, and what they believed their institution would ultimately promote.

The Rev. Henry C. Potter, D. D., made the next address, and in it said that the people of New York were sadly deficient in civic devotion. With the enormous wealth in the city, so little was expended in building up its institutions that the importance of such a school as was now being inaugurated was at once apparent. Not alone ought medical men to be interested in an institution which meant so much to them, but the public at large, their patients, needed also to have great concern on the subject.

Dr. J. Marion Sims and the Hon. John Bigelow also made some remarks, and Prof. Frederic R. Sturgis, Secretary of the Faculty, then gave the announcement of the regular course of lectures, which commenced with one on clinical surgery by Prof. James R. Little at three P. M. on Monday, November 6th.

— The new Charity Organization Society for promoting coöperation among the charities of the city, reports that ten societies and churches have allied themselves with the movement during October. The total number of relief-giving agencies now coöperating in the exchange of registration and information is one hundred and two. Reports of 3990 cases were received during the month from these institutions, and the information in cases of overlapping and duplication was confidentially returned immediately to each Society reporting the same case. The Society is getting up a street register so that it can be ascertained in what houses and localities all families and individuals applying for aid are to be found.

PHILADELPHIA.

— One of the most useful forms of charitable medical relief is the establishment of sick-diet kitchens for supplying to the sick poor nourishing and properly cooked food, and possibly some of the little delicacies of which the sick are often so urgently in need. In Philadelphia, besides the various home missions, soup houses, etc., which relieve the ordinary physical needs of the destitute, there are a number of kitchens established in different parts of the city by the Protestant Episcopal City Mission, where "extra diet" recommended by physicians is prepared and daily given or sent gratuitously to the sick poor. There are now four of these kitchens in active operation, and they have proved to be among the most successful and useful of the various undertakings of the City Mission. It is intended to open two more of them as soon as the funds of the mission will permit. During the last year these diet kitchens have disbursed to the sick poor 28,281 rations of nourishing and attractive food. Nearly two hundred consumptives were regularly supplied with such diet as their condition required. Certainly the work of providing proper articles of food for the sick poor who for good reason prefer remaining at home to going into a public hospital, is one of the most beneficent forms of charity. The entire amount of money expended during the year was $24,000, but in this are included objects of general charity, groceries, coal, wood, garments, etc., besides the diet kitchens. An idea of the scope and value of the service rendered by the latter may be obtained by a glance at the following list of the character of rations furnished during the year: Quarts of soup, 25,717; pounds of meat, 10,058; pints of beef tea, 3779; pints of farinaceous foods and puddings, 16,967; quarts of milk, 10,895; pints of stewed fruit, 3749; glasses of jelly, 161; dozens of eggs, 105; loaves of bread, 339; besides large quantities of other articles of diet. Physicians who have upon their visiting list the names of poor but deserving patients whose limited resources are seriously straitened by sickness can fully appreciate the advantages of being able to obtain the much needed food properly prepared, as well as some of the delicacies which the sick and convalescent crave, but which are too often beyond their means.

— In marked contrast to the operations of the above-named Christian charity is the criminal mismanagement of the sick and destitute in the Philadelphia Hospital and Blockley Almshouse, which until recently were apparently abandoned to the tender mercies of politicians. The peculations and thievery of those in charge are still engaging the attention of the daily press. It has, however, a mournful medical interest as finally giving a reason for the hitherto inexplicable one hundred per cent. mortality in the foundling department, and of some glaring defects in the management of the hospital. We now learn that the patients were not only systematically robbed in their medical supplies, food, and clothes, but the roof was even stolen from one of the buildings and sold for old copper. One of the unpleasant features of this disgraceful exposure was the manner in which the medical staff of the hospital was marshaled a few months since by the politicians and made to testify to the satisfactory character of the management of the hospital, and to the fitness of the superintendent; but matters had reached such a pass that it was impossible to prevent an investigation, some of the details of which have already made a tremendous sensation in some circles, and probably is destined to make more before it is ended.

— One of the obstetrical staff of the Philadelphia Hospital having a difficult case of labor in a negro woman, delivered her before the class with the aid of the forceps. Although he was following established precedent, and had himself performed a similar operation before the class some years ago, the matter appeared in the papers, and he was officially censured by the Board. An indignation meeting of the staff was held, and resolutions adopted condemning this hasty action, and a committee of conference was appointed to make the proper representations to the authorities named, which accordingly rescinded the offending vote. Nevertheless, the physician concerned, Dr. Wm. H. Warder, found it convenient to send in his resignation at the next meeting. He had long and faithfully served the hospital, and is a physician well known and in large practice in this city.

— The Board above mentioned has also appointed two women upon the medical staff of the Philadelphia Hospital to serve as attending obstetricians; the appointees are Hannah T. Croasdale, M. D., and Clara Marshall, M. D., both graduates of the Women's Medical College of Philadelphia.

— There have been in the various hospitals, and probably in private practice also, this fall, a somewhat larger number than usual of typhoid fever cases, but the type of the disease is generally mild. A large number of the cases have no diarrhœa, do not have hyperpyrexia, nor marked headache; very few have epistaxis, and the cerebral disturbance is more expressed by restlessness and loss of sleep than by delirium. Still the course of the disease, the temperature record, the spots, and dry, coated tongue, with enlarged spleen, great prostration, and tendency to relapse, leave no doubt as to the character of the fever. The prevailing treatment here is usually hygienic and symptomatic. The mortality has been about one in twenty to one in twenty-five. Da Costa prefers codeia (one half grain repeated) at night to relieve the restlessness, and gives internally mineral acids, and turpentine when the tongue is very dry; opium suppositories are used to regulate the number of discharges where diarrhœa exists, and simple enemata for constipation; sweet oil and tincture of belladonna are given during convalescence if constipation proves obstinate.

— The classes at the colleges are claimed to be about as large as last year.

— A man poisoned by oxalic acid taken by mistake for magnesium sulphate was recently carried to the Homœopathic Hospital in this city. Strange to say he recovered; he probably was not treated with high potencies.

— Speaking of homœopathic remedies, the following delectable substances are contained in the American Homœopathic Pharmacopœia (published by Bœnike & Tafel, New York, 1882), whose names sufficiently indicate their composition: *syphilinum, buboinum, gonorrhin, leucorrhin, glanderin, anthracin, psorin*, etc., etc. They are called isopathic remedies or nosodes, which are defined to be "remedies obtained from morbid products of the animal system." Is the public at all interested in knowing who administers such repulsive and loathsome agents, or is it too indolent to inquire?

Miscellany.

HERBERT SPENCER ON DEGENERATIVE TENDENCIES IN AMERICAN LIFE.

At a banquet tendered to Mr. Herbert Spencer, last week, by a number of eminent literary and scientific men, on the eve of his return to England, the distinguished guest departed so far from the traditional after-dinner speech as to give some earnest words expressive of his solicitude regarding the effect of the intense application which he had observed to characterize our American business and professional life. From his reported remarks we make the following extracts: —

"It seems to me that in some respects Americans have diverged too widely from savages. You know that the primitive man lacks power of application. Spurred by hunger, by danger, by revenge, he can exert himself energetically for a time, but his energy is spasmodic. Monotonous daily toil is impossible to him; it is otherwise with the more developed man. The stern discipline of social life has gradually increased the aptitude for persistent industry until among us, and still more among you, work has become with many a passion. This contrast of nature has another aspect. The savage thinks only of present satisfactions and leaves future satisfactions uncared for. Contrariwise the American, eagerly pursuing a future good, almost ignores what good the passing day offers him, and when the future good is gained, he neglects that while striving for some still remoter good. What I have seen and heard during my stay among you has forced on me the belief that this slow change from habitual inertness to persistent activity has reached an extreme from which there must begin a counter change — a reaction. Everywhere I have been struck with the number of facts which told, in strong lines, of the burdens that had to be borne. I have been struck, too, with the large proportion of gray-haired men, and inquiries have brought out the fact that with you the hair commonly begins to turn some ten years earlier than with us. Moreover, in every circle I have met men who had themselves suffered from nervous collapses, due to stress of business, or named friends who had crippled themselves by overwork, or had been permanently incapacitated, or had wasted long periods on endeavors to recover health. I do but echo the opinion of all the observing persons I have spoken to, that immense injury is being done by this high-pressure life. The physique is being undermined. That subtle thinker and poet whom we have lately had to mourn, Emerson, says in his essay on 'The Gentleman,' that the first requisite is that he shall be a good animal. The requisite is a general one — it extends to the man, to the father, to the citizen. We hear a great deal about 'the vile body,' and many are encouraged by the phrase to transgress the laws of health, but nature quietly suppresses those who treat thus disrespectfully one of her highest products, and leaves the world to be peopled by the descendants of those who are not so foolish. Beyond these immediate mischiefs there are remoter mischiefs. Exclusive devotion to work has the result that amusements cease to please; and, when relaxation becomes imperative, life becomes dreary from lack of its sole interest — the interest in business. The remark current in England, that when the American travels his aim is to do the greatest amount of sight-seeing in the shortest time, I find current here also; it is recognized that the satisfaction of getting on devours nearly all other satisfactions. When recently at Niagara, which gave us a whole week's pleasure, I learned from the landlord of the hotel that most Americans come one day and go away the next. Old Froissart, who said of the English of his day that 'they take their pleasure sadly after their fashion,' would, doubtless, if he lived now, say of the Americans that they take their pleasures hurriedly after their fashion. In large measure with us, and still more with you, there is not that abandonment to the moment which is requisite for full enjoyment, and this abandonment is prevented by the ever present sense of multitudinous responsibilities. So that beyond the serious physical mischief caused by overwork, there is the further mischief that it destroys what value there would otherwise be in the leisure part of life. Nor do the evils end here. There is the injury to posterity. Damaged constitutions reappear in children and entail on them far more of ill than great fortunes yield them of good. When life has been duly rationalized by science it will be seen that among a man's duties that of the body is imperative, not only out of regard of personal welfare, but also out of regard for descendants. His constitution will be considered as an entailed estate which he ought to pass on uninjured, if not improved, to those who follow; and it will be held that millions bequeathed by him will not compensate for feeble health and decreased ability to enjoy life. Hereafter, when this age of active, material progress has yielded mankind its benefits, there will, I think, come a better adjustment of labor and enjoyment. In brief, I may say that we have had somewhat too much of the 'gospel of work.' It is time to preach the gospel of relaxation.

"This is a very unconventional after-dinner speech. Especially it will be thought strange that in returning thanks I should deliver something very much like a homily. But I have thought I could not better convey my thanks than by the expression of a sympathy which issues in a fear. If, as I gather, this intemperance in work affects more especially the Anglo-American part of the population — if their results are undermining of the physique, not only in adults but also in the young, who, as I learn from your daily journals, are also being injured by overwork — if the ultimate consequence should be a dwindling away of those among you who are the inheritors of free institutions, and best adapted to them, then there will come a further difficulty in the working out of that great future which lies before the American nation."

◆

TYPHOID FEVER AND MALARIA.

Under the head of Prominence of Typhoid Fever, the Secretary of the State Board of Health of Connecticut reports as follows for the month of September: —

This return of typhoid fever to prominence, and its steady increase in frequency for the last three years, is apparently a part of an extensive and comprehensive movement. As the epidemic of malaria was ushered in by a decrease, and in places almost if not quite a total disappearance, of typhoid, this return of typhoid fever to its former importance and relative frequency is an indication of the decrease and disappearance of malaria. The tendency towards typhoid fever commenced several years ago, and has steadily grown stronger each year, as shown by the increased prevalence, tendency to unusual frequency and severity, and the increase each year of deaths from this cause. As the decrease in the frequency of typhoid preceded the malarial wave, so its increase precedes the entire disappearance of malaria, but gives us some ground for hope that such a disappearance will take place. This disappearance of epidemics of malarial fever, on a large scale, has often been followed by an unusual prevalence of typhoid fever or an extensive epidemic. The epidemics of malarial fever of 1807 and 1824, which are stated to have extended over all Europe, were followed by typhoid fever. Of course it is as yet but an inference that the present malarial influence which has extended continuously over the greater part of this State into Massachusetts and Rhode Island is subsiding and leaving its first points of invasion. But there is much to encourage such an idea. It is quite a prevalent impression that there has commenced a steady decrease in the general frequency of malaria in the west and southwestern parts of the State. However that may be, the return of typhoid fever, the tendency towards a continued type shown by malarial fevers, the large percentage of typo-malarial fever, forming 86 per cent. of the mortality from malarial diseases last year, or 222 out of 357 deaths, are obvious facts. Whether or not malaria will become endemic in any part of the State is a question of interest that time only can determine. The idea has been advanced that the southwestern part of this State is a border land where the epidemic influence from the southwestern regions (especially Westchester County, where malaria is endemic) finds a resting place, whence, if reinforced repeatedly, or strong enough originally, it invades other parts of the State. The same tendency before noted to greater severity in regions where it has existed for some time continues, while few cases of acute intermittent occur. Thus congestive chills are reported in several instances, one fatal case in Hartford, one in Meriden. A singular fact often illustrated is the tendency to acute intermittent shown by new-comers, even if they come from a malarious region, and had had ague previously. What at first looked like a fresh recurrence of acute intermittent was found on investigation to be mainly confined to the new families that had recently moved from New Jersey.

◆

DEATH FROM MALE FERN.

A case of some toxicological and medico-legal interest has recently occurred in Ceylon. A medical practitioner of good reputation had a patient from whom he had made several unsuccessful attempts to remove a tape-worm. A final effort was resolved upon, and the physician prescribed *one and a half ounces* of ethereal extract of male fern, and three drachms each of powdered kamala and pomegranate root, in a vehicle of mucilage, syrup, and cinnamon water. The directions were that it should be taken in divided doses at an interval of three or four hours. The pomegranate root was omitted by the dispenser, who informed the physician of the fact. The patient took the first half of the prescription at bed-time, and began to feel much distress, but took the second at two A. M., as directed. He became worse, and medical attendance was summoned, but he died before morning, after diarœa (which expelled the worm), vomiting, cramps, d symptoms of collapse. The attendant certified e death as due to "choleraic diarrhœa." The autop- y gave signs of an irritant poison, and a strong smell f ether pervaded the intestinal canal. The defense vas that the prescription was taken from Dr. Naphey's Medical Therapeutics, and was recommended on the uthority of Dr. Brinton, of London. Query was made whether the one and a half ounce of male fern was not a misprint. But the fact that this occurred in a seventh edition of the book was considered rather against that explanation. In view of the eminent authority on which the treatment was based, and the good faith of the practitioner, no further prosecution was made. The ethereal extract, which is practically identical with the oleoresin of the United States Pharmacopœia, is ordinarily recommended in doses of from one and a half to two fluid drachms, and some recent writers have given special warning against its irritant action.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 4, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York	1,206,590	579	201	17.78	1.45	5.87	6.39	.69
Philadelphia	846,984	358	11	24.71	5.07	—	13.13	3.07
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	157	44	21.65	8.92	7.01	5.09	6.37
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	167	65	47.67	1.20	5.38	13.73	1.79
Cincinnati	255,708	110	41	18.18	12.72	3.64	4.55	.91
New Orleans	216,140	106	29	20.75	5.66	6.60	.94	.94
District of Columbia	177,638	72	—	15.29	12.51	1.39	4.17	1.39
Pittsburg	156,381	62	18	38.69	12.90	1.61	11.28	16.12
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	35	—	20.00	5.71	5.71	2.86	—
Providence	104,857	44	10	15.92	2.27	9.10	2.27	2.27
New Haven	62,882	20	7	15.00	15.00	5.00	—	—
Charleston	49,999	39	10	23.07	2.56	2.56	2.56	2.56
Nashville	43,461	17	6	17.65	11.76	11.76	5.88	—
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	20	8	30.00	20.00	10.00	10.00	—
Cambridge	52,740	26	8	30.77	3.85	7.69	7.69	11.54
Fall River	49,006	22	5	9.09	13.64	4.54	—	4.54
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	14	4	14.28	7.14	7.14	—	—
Springfield	33,340	6	1	33.33	—	16.66	—	—
Salem	27,598	8	3	37.50	—	12.50	—	12.50
New Bedford	26,875	9	2	11.11	—	—	—	—
Somerville	24,985	—	—	—	—	—	—	—
Holyoke	21,851	9	3	55.55	11.11	11.11	11.11	—
Chelsea	21,785	8	4	12.50	—	—	—	12.50
Taunton	21,213	—	—	—	—	—	—	—
Gloucester	19,329	8	1	12.50	—	—	—	12.50
Haverhill	18,475	1	0	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	8	1	12.50	12.50	—	—	12.50
Newburyport	13,537	3	1	33.33	—	—	—	—
Fitchburg	12,405	6	2	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Sixteen Massachusetts towns	117,175	36	11	22.22	2.78	13.89	—	5.55

Deaths reported 1950 (no reports from Brooklyn, Chicago, and St. Louis): under five years of age 557: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 415, consumption 290, lung diseases 174, diphtheria and croup 141, diarrhœal diseases 92, typhoid fever 52, small-pox 27, malarial fevers 26, scarlet fever 21, whooping-cough 21, cerebro-spinal meningitis 12, puerperal fever 10, measles seven, erysipelas five, typhus fever one. From *small-pox*, Baltimore 21, Philadelphia, New Orleans, and Pittsburg two each. From *malarial fevers*, New York 10, New Orleans seven, District of Columbia five, Baltimore two, Cincinnati and New Haven, one each. From *scarlet fever*, Cincinnati nine, Philadelphia four, New York and Boston two each, Baltimore, District of Columbia, New Haven, and Worcester one each. From *whooping-cough*, New York and Charleston five each, Pittsburg and Milwaukee two each, Philadelphia, Boston, Baltimore, New Orleans, Providence, Cambridge, and Holyoke one each. From *cerebro-spinal meningitis*, New York and New Orleans three each, Baltimore, Charleston, Springfield, Salem, New Bedford, and Peabody one each. From *puerperal fever*, Boston, Milwaukee, and Holyoke two each, Baltimore, Worcester, Lynn, and Newburyport one each. From *measles*, New York six, Pittsburg one. From *erysipelas* Philadelphia two, New York, Baltimore, and Pittsburg one each. From *typhus fever*, New York one.

Seventy-five cases of small-pox were reported in Baltimore, Pittsburg 15, Cincinnati one; typhoid fever 28, diphtheria 26, scarlet fever 17, in Boston; scarlet fever 14 and diphtheria five, in Milwaukee.

In 31 cities and towns of Massachusetts, with a population of 886,828 (population of the State 1,783,086), the total death-rate for the week was 20.00 against 19.11 and 17.20, for the previous two weeks.

For the week ending October 14th, in 170 German cities and towns, with an estimated population of 8,493,137, the death-rate was 23. Deaths reported 3750: under five years of age 1794; consumption 527, lung diseases 320, diarrhœal diseases 182, diphtheria and croup 170, scarlet fever 116, typhoid fever 62, whooping-cough 50, measles and rötheln 38, puerperal fever 28, typhus fever (Kolberg one) one. The death-rates ranged from 13 in Metz to 34.2 in Chemnitz; Königsberg 31.2; Breslau 28.4; Munich 26; Dresden 23.8; Berlin 24; Leipzig 17.3; Hamburg 21; Cologne 28; Frankfort a. M. 16.7; Strasburg 28.8.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending October 21st, the death-rate was 20.4. Deaths reported 3308: acute diseases of the respiratory organs (London) 290, scarlet fever 136, diarrhœa 118, fever 92, measles 91, whooping-cough 57, diphtheria 35, small-pox (London three) 6. The death-rates ranged from 13.7 in Bolton to 34.2 in Sunderland; Bristol 16.6; Birmingham 18; London 19.4; Leeds 21.3; Liverpool 25.7; Birkenhead 25.9; Cardiff 28.3. In Edinburgh 17.7; Glasgow 22.1; Dublin 22.5.

For the week ending October 21st, in the Swiss towns, population 494,390 there were 19 deaths from diarrhœal diseases, consumption 18; lung diseases 10, typhoid fever eight, erysipelas three, whooping-cough one, diphtheria and croup one. The death-rates were, in Geneva 12.4; Zurich 14.2; Basle 15.5; Berne 19.5.

The meteorological record for the week ending November 4th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
October–November, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 29	30.043	56	63	41	86	85	93	88	SE	S	SW	10	12	8	O	O	O	—	—
Mon., 30	30.095	57	68	50	72	32	60	55	W	W	W	6	6	5	F	C	F	—	—
Tues., 31	30.080	56	63	42	83	84	93	87	W	S	SW	3	8	8	C	O	F	—	—
Wed., 1	29.911	62	72	52	93	17	43	51	SW	W	W	10	8	7	T	C	C	—	—
Thurs., 2	30.179	43	55	33	48	26	68	47	NW	NW	NW	12	17	10	O	C	C	—	—
Fri., 3	30 321	37	48	32	68	45	63	59	NW	SE	W	10	7	4	C	C	C	—	—
Sat., 4	30.487	37	47	35	57	48	69	58	N	E	N	6	13	9	O	C	C	—	—
Means, the week.	30.159	48						64										1.40	—[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.
[2] Too small to measure.

OBITUARY.

At a special meeting of the Medical Board of St. Peter's Hospital, Brooklyn, held at the hospital on Saturday, October 14, 1882, to take action on the death of A. L. Lowell, M. D., one of the attending surgeons of the hospital, it was

Resolved, That in the death of Dr. A. L. Lowell the members of the Medical Board have lost an associate who commanded their confidence and esteem in both public and private relations.

Resolved, That St. Peter's Hospital has lost the services of a skillful, efficient, and benevolent surgeon; one who practiced our healing art with untiring and single-minded zeal.

Resolved, That we offer to his family our sincere sympathy in their loss; and that these resolutions be communicated to them and published in the *New York Medical Record* and the *Boston Medical and Surgical Journal.*

By order of the Board,
William Hammet Martin, M. D., *Secretary.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 3, 1882, TO NOVEMBER 10, 1882.

Spencer, W. C., surgeon. In addition to his duties at Fort Snelling, Minn., to perform the duties of attending surgeon at department headquarters. S. O. 176, Department of Dakota, October 24, 1882.

Ainsworth, F. C., assistant surgeon. Granted leave of absence for one month, with permission to apply for extension of one month. S. O. 120, Department of Texas, November 1, 1882.

Brewster, William B., assistant surgeon. On being relieved by Acting Assistant Surgeon Potter, will proceed to Fort Bridger, Wyoming, reporting to the commanding officer thereof for duty. S. O. 116, Department of the Platte, November 4, 1882.

Barnett, Richards, assistant surgeon. Granted leave of absence for one month, with permission to apply for extension of five months. S. O. 202, Department of the East, November 1, 1882.

Gray, W. W., assistant surgeon. Granted one month leave of absence on surgeon's certificate of disability, with permission to apply for an extension of five months. S. O. 103, Department of the South, October 31, 1882.

McElderry, Henry, assistant surgeon. Upon arrival of Assistant Surgeon Brewster at Fort Bridger, Wyoming, to be relieved and ordered to Fort Robinson, Neb., to report to the commanding officer thereof for duty. S. O. 116, Department of the Platte, November 4, 1882.

O'Reilly, Robert M., captain and assistant surgeon. Detailed as member of board of officers to assemble at Washington, D. C., to examine into and report upon qualifications of candidates for superintendents of national cemeteries. S. O. 254, A. G. O., October 31, 1882.

Appel, Aaron H., first lieutenant and assistant surgeon. Leave of absence extended two months. S. O. 255, A. G. O., November 1, 1882.

Brechemin, Louis, first lieutenant and assistant surgeon. Leave of absence for five months granted. S. O. 259, paragraph 2, A. G. O., November 6, 1882.

Boston Society for Medical Observation. — A regular meeting of the Society will be held at the Medical Library, 19 Boylston Place, on Monday, November 20, 1882, at eight o'clock P. M. Reader, Dr. J. F. Bush. Subject, A Case of Intestinal Obstruction. Dr. J. G. Blake will open the discussion.

C. M. Jones, *Secretary.*

Books and Pamphlets Received. — Observations upon the Importance and Means of Ventilation. By G. P. Conn, M. D., Concord. 1882. (Reprint.)

Some Points on the Administration of Anæsthetics. By George H. Rohé, M. D., Professor of Hygiene and Clinical Dermatology. Baltimore.

Use of the Ecraseur for Curing Deep-Seated Fistula in Ano. By J. M. F. Gaston, M. D. (Reprint.) 1881.

Pathological Anatomy, Pathology, and Physical Diagnosis. A Series of Clinical Reports comprising the Principal Diseases of the Human Body. Systematically arranged in One Hundred Full-Page Illustrations and One Hundred Pages Text. By J. A. Jeançon, M. D. Cincinnati. 1883. Complete in 25 Parts. Part 1.

Lectures.

ON THE TREATMENT OF PNEUMONIA.[1]

BY PROFESSOR DUJARDIN-BEAUMETZ,

Physician to the Hôpital St. Antoine, Member of the Academy of Medicine, Paris, France.

LECTURE II.

GENTLEMEN, — At the close of my last lecture I had begun to speak of hydrotherapy in pneumonia.

Although the treatment of acute inflammatory disorders by cold applications and cold baths is of quite ancient date, this did not become an established practice till Brand, Liebermeister, Lebert (of Breslau), Fismer (of Bâle), Vogel (of Berne), and Jurgensen (of Kiel), demonstrated that it was possible to treat pneumonia by this method, and treat it successfully. This practice is now limited to Germany and Switzerland. You are not ignorant of the long discussions which arose in our medical societies *à propos* of the application to typhoid fever of the method of Brand, and how that, after debating the subject in a manner characterized by want of agreement, and after repeated trials made in our hospitals, the method of treating, not merely typhoid fever, but febrile diseases in general, by cold baths fell into desuetude.

Among the inconveniences which followed rigorous antipyretic methods we had to note that pneumonias, so treated, often, instead of being made to take a more favorable course, become rapidly mortal. You see, then, why this treatment of the disease came to be discredited. It is understood, however, that hydrotherapeutic measures are not altogether excluded; cold baths we condemn, but warm or tepid baths may render excellent service, as I shall show when I come to speak of the pneumonias of children.

In opposition to all the previously mentioned therapeutic methods, — all of which act by depressing the system to the extent of lowering the pulse and the temperature, — we prefer the tonic and supporting treatment, whose type is the alcoholic medication of pneumonia.

The celebrated English physician Todd, in introducing alcohol into the treatment of pneumonia, occasioned, it must be admitted, a veritable revolution.

This treatment at first gave startling results from the stand-point of statistics. Look at the figures given by Jaccoud [2] and you will see that while in the case of pneumonia treated by blood-letting we have an average mortality of twenty-seven per cent., the mortality is only about three per cent. under the supporting treatment.[3]

With regard to these statistics I need not repeat what I said in my last lecture in reference to the application of this numerical method to the solution of the difficult question, what remedies and what modes of treatment do the most good? To show you what a difference there is between results obtained from the same kinds of treatment I have only to tell you that in Paris, in the first quarter of the present year,[4] according to the very interesting reports made to the Medical Society of the Hospitals, on Prevalent Diseases, by our secretary-general, Dr. Ernest Besnier, the mortality in pneumonia has been twenty-four per cent., while at the same time the greater number of our colleagues (if not all) were employing the tonic and supporting treatment. Between the figure given by Jaccoud of three per cent. and that of twenty-four per cent. the difference is great; it results simply from this fact, that the pneumonias at the beginning of this year, by reason of the climacteric conditions which have provoked them, have been of extraordinary severity.

How can we explain the favorable action of alcohol in pneumonia? This is an important question, on whose consideration I ask your permission to dwell for a few moments.

For quite a number of years I have been engaged, with some perseverance, in the study of the action of alcohol on the economy, and although I have not yet attained a complete solution of this physiological problem, I believe, nevertheless, that we are warranted to-day in affirming that alcohol acts in three ways: as food, as medicine restraining waste,[5] and as a tonic. Let us examine each of these properties.

Alcohol acts as food. Here is one of the points the most disputed in the physiological action of this substance. You are well aware that there are two decisive opinions as to this action: one party maintains that the larger part of the alcohol ingested is burned in the economy; this is the opinion defended by Liebig, Bouchardat, and Sandras. The other party, represented by Perrin, Lallemand, and Duroy, claims, on the contrary, that alcohol undergoes no modification in our tissues.

In support of each of these opinions chemical arguments have been adduced, and physiological arguments; I have not room in this lecture on pneumonia to enumerate them in their entirety,[6] but what I can affirm, and that because I have studied the subject under all three of its aspects, is that it is impossible to furnish a direct experimental solution of this problem.

---

[1] Delivered in the Hôpital St. Antoine, and translated, by permission, from advanced sheets, by E. P. Hurd, M. D., Newburyport, Mass.

[2] Leçons de Clinique Professées à l'Hôpital de la Charité, page 70.

[3] The following are Jaccoud's tables: —

I. Pneumonia treated by Bleeding.

Statistics of Edinburgh Hospitals, 698 cases; mortality 34.52 pr. ct.
Statistics of Dietl . . . 95 cases; mortality 20.40 pr. ct.

Total . . . 793 cases; mortality 27.00 pr. ct.

II. Pneumonia treated by Tartar Emetic alone.

Statistics of Rasori, 648 cases; mortality 22.06 per. cent.
Statistics of Dietl, 106 cases; mortality 20.76 per cent.

Total . . 754 cases; mortality 21.38 per cent.

III. Pneumonia treated by the "mixed methods." Expectancy in mild cases, bleeding and antimony in serious cases. (Results grouped by Laennec, Grisolle, and Skoda.)

Maximum mortality . . . . . . 16 per cent.
Minimum mortality . . . . . . 12 per cent.

IV. Pneumonias abandoned to themselves. (Expectancy pure.)

Statistics of Dietl, 189 cases; mortality 7 per cent.

V. Pneumonia treated exclusively by the Tonic Regimen.

Statistics of Bennett, 129 cases; mortality 3.10 per cent.

[4] These lectures were delivered in 1881.

[5] Medicament anti-déperditeur, aliment d'épargne.

[6] The proofs which have been adduced in favor of the combustion or non-combustion of alcohol in the economy are of two kinds: the one chemical, the other physiological. Chemistry seems to give support to the theory of non-combustion.

In fact, when you examine the excretions, and even the viscera in subjects poisoned by alcohol, you find alcohol unchanged, and one of the clearest tests of its presence is certainly the solution of bichromate of potassium and sulphuric acid. The alcohol reduces the chromic acid to a green oxide of chromium, and the liquid turns from red to an emerald green color.

Note, however, that *à propos* of this reagent, Anstie and Dupré have shown that mistakes may occur, and that persons who have not taken a drop of alcohol, sometimes excrete in their urine a substance which acts like alcohol with bichromate of potash.

Moreover, in these researches the causes of error are numerous, especially when you wish to show the presence by analysis of one of the derivatives of the combustion of alcohol, be it aldehyde or acetic acid.

We indeed find alcohol unchanged in the tissues and in the excretions; the analysis which we recently made in our hospital service of the viscera of a man who, after killing his two sons, committed suicide by swallowing a quart of raw brandy, revealed the presence of this brandy in notable proportion in the brain, spinal cord, kidneys, liver, and lungs; but the quantity which we found, did it equal that which had been ingested? Here lies the whole question.

To-day, thanks to the experiments of my excellent *interne* in pharmacy, Jaillet, we are in position to affirm that alcohol does undergo transformation in the economy. Jaillet has, in fact, demonstrated that in presence of hæmoglobin and oxygen alcohol is transformed into aldehyde, then into acetic acid. This reaction, which takes place in the apparatus of our laboratory, ought also to take place when alcohol is introduced into the economy and passes into the blood. Alcohol is, then, a food, and we can qualify this statement by saying that it acts as food by giving force and restraining waste. In order to undergo its successive transformations in the system, alcohol takes its oxygen from the blood, and in particular from the oxy-hæmoglobin, and if the dose is too large it stops hæmatosis and the individual dies asphyxiated. In thus withdrawing from the blood the oxygen necessary to effect its transformation into acetic acid, alcohol diminishes the combustions of the economy, and it is probably in this way that it depresses the temperature in fever patients.

In the experiments performed by Dujardin-Beaumetz and Jaillet to study into this question, they were positive in having found aldehyde in the viscera of men and animals poisoned by ethylic alcohol, and had even obtained, in one of their experimentations, the reduction on a mirror of silver nitrate, which is one of the best tests of ethyl-aldehyde [the aldehyde separating the silver in the metallic form]; but a more attentive examination of the facts has shown to these experimenters that the aldehyde which they found may have come from its presence, in the normal state, in a great number of alcoholic liquors. They have sought to solve the problem by the use of alcohols higher in the series, and particularly amylic alcohol, but the difficulties attending these investigations have so far stood in the way of any definite solution.

Recently Jaillet has shown that in passing a current of oxygen over blood containing alcohol the latter is transformed into acetic acid.

As for the physiological proofs they are concerned principally with the effects of alcohol upon the combustions of the economy, and in particular upon the temperature; but here, too, the opinions are contradictory.

When considerable quantities of alcohol are administered the temperature is observed to fall appreciably, and in the experiments of Dujardin-Beaumetz and Audigé, it was observed that under the influence of heroic doses of alcohol the temperature fell fifteen to eighteen degrees. With doses much smaller the same fall of temperature has been seen; thus Bocker, Dupré, and Anstie have noted that in quite inconsiderable doses (one to three ounces a day) there was a constant lowering of bodily heat.

At the same time fairness requires the statement that Parker and Wollowicz have obtained quite different results, which go to show that, in the case of the human subject, the administration per diem of from twenty-eight to fifty-six cubic centimetres of alcohol caused no decline of temperature, whether in the physiological or the pathological state. These conclusions are vitiated by the fact that these gentlemen do not specify the lapse of time between the ingestion of the alcohol, and the taking of the temperature. In the case of animals Dujardin-Beaumetz and Audigé have always remarked, even when quite large doses of alcohol were given, that there exists a period which follows immediately the ingestion of the spirit, during which no fall of temperature is observed, sometimes even there is a decided rise. This period, whose duration varies with the quantity of alcohol administered, becomes very short and scarcely appreciable when the quantity of the poison is enormous. This rise in temperature corresponds with the period of excitation, but ceases with that of resolution and collapse.

Therefore other arguments have been adduced which pertain, this time, to the quantity of carbonic acid exhaled and the quantity of urea excreted. The principal experiments of this kind are those of Maurice Perrin on himself. The quantity of CO^2 was determined by careful weighing. Various spirituous beverages, such as red and white wines and beer, were used, and always after the ingestion of these beverages a diminution was noted in the excretion of CO^2. This diminution reaches its maximnm three hours after the ingestion of the alcohol, and in five hours the normal condition is restored. As for the percentage of urea there is a slight increase under the influence of alcoholic beverages, due, not to increase of combustions, but to the stimulant action of the alcohol on the kidneys and the resulting augmentation of urine.

Thus we see that the physiological results, while giving to a certain extent support to the partisans of the combustion of alcohol in the economy, do not completely decide the question. Everybody is agreed that alcohol acts without having undergone change on the nervous centres, determining phenomena of excitation and depression; but one may properly ask if in the first period of its influence, that of ebriety or excitation, the sentiment of warmth and *bien-être* which accompanies it, and for which resort is often had to the spirituous beverage, is not due to the combustion of a feeble quantity of alcohol.

In fine, alcohol acts unchanged upon the cerebro-spinal centres, and determines there phenomena of excitation and tonicity, and it is in this way that we explain its tonic and stimulant action.

From these conclusions it is easily understood how alcohol comes to be of service in the treatment of pneumonia. It supports the vital forces, braces up the tissues, and instead of augmenting the temperature, lowers it.

At the Medical Congress in Brussels in 1875 I maintained, with Semmola, of Naples, and against Desguin and Crocq, who protested against the use of alcohol in pneumonia, that of all antipyretic remedies alcohol is assuredly the safest.

However, this question of the application of alcohol to medicine, and in particular to pneumonia, is one of the most delicate and difficult questions in therapeutics, and we are reminded that the transit from the province of experimentation to practical clinics is likely to be a violent transit. I am at one with Peter in this respect, who shows the great difference which exists between an animal whose temperature you depress experimentally by the administration of alcohol, and a pneumonic patient whose temperature you have by the same means brought back to the normal standard; you obtain results in the one case by attempting to poison, in the other by attempting to cure.

Experimentation with animals, in fact, takes note only of the toxic effects of the substance which it investigates; very rarely the experimentalist is in position to observe therapeutical effects. It is experimental toxicology, and not experimental therapeutics. To conclude *from* what takes place in animals poisoned by alcohol *to* what takes place in a fever patient who has been treated by medicinal doses of alcohol would be to commit a serious mistake. To decide this question, then, we must refer ourselves to the clinic, and to the observation of the sick; we shall then see that in certain determined conditions, which I shall set forth when I shall give you the indications and contra-indications of the treatment of pneumonia, alcohol gives excellent results.

Has this alcoholic medication any inconveniences? Yes, and certain English physicians, and in particular Drysdale and Keer, have been the first to point them out. The administration of alcohol to your fever patients may give them the taste for ardent spirits, and females especially have been known to become tipplers after recovery from a pneumonia that was freely treated with spirituous liquors.

You know, gentlemen, the vehemence of the contest which is carried on in England against the abuse of ardent spirits. The temperance societies, with a zeal that merits every encouragement, persist in opposing the ever-increasing progress of intemperance. You comprehend, then, that the partisans of the temperance leagues stand dismayed before such results. But cases where the use of alcohol in medicine has led to chronic alcoholism and all its evils are exceptional. A much more grave inconvenience, in my opinion, attends the usage of alcohols in large doses. I allude to the disturbances which these liquors may occasion in the digestive tube, especially when they are of bad quality. I shall return to this point in my next lecture.

By the side of the noted methods of treatment whose history I have just traced, we must place expectancy, that is to say, the doctrine that it is well to leave pneumonia to work out its own evolution, without directing against it any active treatment.

I showed you, in my first lecture, that one of the first results of statistics in the study of the treatment of pneumonia, had been the startling discovery that pure expectancy gave more advantageous results than the employment of energetic medications, and Skoda, Dietl, in Germany, Magnus Huss, in Norway, Bennett, in England, and Laboulbène, in France, have produced numerous statistics demonstrative of this fact.

But since the introduction of the medication by alcohol, expectancy pure has lost many of its partisans, and we shall see as we continue this course, that if expectancy is the logical consequence of the cyclical march of pneumonia, it cannot be raised to the dignity of a therapeutic method, for according to the circumstances, and according to the complications, the duty of the physician is to render assistance.

Permit me to finish this lecture in enumerating, by the side of the great methods of treatment which I have been considering, the divers medications which have also been recommended. Strohl, of Germany, has vaunted sugar of lead, and Leudet claims good results from the same remedy; Greenway, in England, strongly advises phenic acid; James, the salicylic acid; Salvator Avigo, small doses of calomel; while Patton is certain that no medicament will ever give as good results as the salts of ammonia, and especially carbonate of ammonia; he claims ninety-four recoveries out of ninety-six patients. In fine, aconite and ergot of rye have their champions.

There are certain extraordinary medications to which I will just allude: the treatment of pneumonia by inhalations of chloroform, as recommended by Baumgartner and others; the administration of cantharides to pneumonic patients (Mendini); the aspiraiton of blood from the inflamed lung by means of a Dieulafoy aspirator.

I have now brought before your notice the greater part of the remedial means proposed against pneumonia, in a word, I have made you acquainted with the weapons which you are to use, but *how* are you going to use them? This is what I propose to tell you in my next lecture, in which I shall speak of the indications and contra-indications of the treatment of pneumonia.

[NOTE BY THE TRANSLATOR. — Allusion having been made to a process of experimentation on the toxic effects of alcohol, conducted by the author of these lectures, and not yet completed, it will be interesting to the readers of this journal to have a brief summary of the results of those experiments. The animals on which these experiments were performed were chiefly dogs and swine. Dujardin-Beaumetz was assisted by Dr. Audigé in these experiments. They employed chiefly the hypodermic method, and they called minimum toxic dose that quantity of pure alcohol, which by kilogramme of the weight of the body of the animal, is necessary to cause death in the space of twenty-four to thirty-six hours, with gradual and permanent fall of the temperature. By pure alcohol is understood alcohol of 100° in the scale of Gay Lussac. This method has enabled them to study the toxic effects of the different alcohols. Quite a thick octavo volume published in 1879 gives the details of over three hundred experiments. (Recherches expérimentales sur la puissance toxique des alcools. Paris: O. Doin.)

The following conclusions result from these researches: —

The least toxic of the alcohols is the ethyl alcohol (from vinous fermentation); the most toxic is the amyl alcohol (potato spirit) — (fusel oil).

As for the toxic phenomena determined by the alcohols, they may be divided into three periods: a period of ebriety or of excitation, a period of resolution, and a period of collapse. These periods undergo modifications depending on (1) the nature of the alcohol employed; (2) the dose administered; (3) the resistance of the subject.

With the alcohols obtained by fermentation, the three periods of acute intoxication succeed each other in a regular order, but in proportion as you depart from the ethyl series, their character is more accentuated, their evolution more rapid, and you see certain convulsive phenomena appear.

With methyl alcohol (wood spirit) the period of excitation is more intense, resolution, collapsus, and the toxic symptoms which accompany them, arrive more rapidly at their maximum, but (we must add) in case the dose is not sufficient to kill, the phenomena disappear more promptly.

With œnanthylic and caprylic alcohols the periods of intoxication do not present the same regularity, and convulsions occur. Glycerine causes an increase rather than a fall of temperature.

In the case of all animals which have died from acute poisoning by alcohol, the necropsy discloses lesions of the respiratory and circulatory apparatus, of the nervous system, and of the kidneys. As for the digestive apparatus, the lesions on the part of the gastric mucous membrane are inconspicuous when the alcohol is introduced by the hypodermic method, but when the poison is administered by mouth the mucous membrane of the stomach is invariably found softened, and the more concentrated the alcohol the greater the softening. The intestine undergoes the same alterations; it is found softened, and of a reddish-black color; punctiform hæmorrhages are produced even when the alcohol is injected under the skin (elimination of alcohol by the intestinal glands).

The liver is more profoundly altered than any other gland. It is congested, softened, and friable. The spleen is engorged with blood and softened. As for the respiratory and circulatory lesions, they are characterized by a profound alteration of the blood, which becomes dark, and forms in the heart clots in considerable quantity. The lungs are congested, and contain apoplectic foci. The kidneys are injected, and present hæmorrhagic extravasations, especially when fusel oil (potato spirit) is used.

Acute alcoholic poisoning in the human subject is attended with similar symptoms, and presents similar post-mortem lesions. Dujardin-Beaumetz reports the particulars of one case, to which allusion is made in the foregoing lecture

Chronic Alcoholic Poisoning. — Administered in fractional and daily doses, alcohol determines an *ensemble* of symptoms to which the name alcoholism has been given.

In this department of study experimental researches are not yet completed, and it is more especially on facts observed in the human subject that all descriptions of chronic alcoholism have been based.

It was in 1879 that Dujardin-Beaumetz and Audigé commenced, in the abattoirs of Grenelle, their researches on slow intoxication by the alcohols. They used swine as the subjects of their experiments, giving these animals daily quantities of the different commercial alcohols, which varied from one gramme to three grammes by kilogramme of weight.

From a letter to me from the professor, bearing date March 18th, I learn that after two years of dosing with alcohol, three hogs had succumbed to the poison.

When the quantity is exceeded of five grammes to the kilogramme, the animal emaciates rapidly, refuses to eat, and soon dies.

Among the post-mortem changes the lesions of chronic gastritis have been noted, also fatty changes in the kidneys. In the case of two of the animals the necropsy revealed atheromatous degeneration of the aorta.

In no instance was cirrhosis of the liver noted, or any of the chronic connective tissue diseases.

The most marked manifestation of chronic intoxication in these animals was a profound, prolonged, somnolence, without any period of excitation. When, however, absinthe was used the animal became very irritable, and the period of excitation persisted for some time. ("Recherches sur la puissance toxique des alcools" and Dictionnaire de Thérapeutique, article "Alcool," by Dujardin-Beaumetz. See also Jaillet in the Bulletin de Thérapeutique, August 15, 1881, "On the Transformation of Alcohol in the Organism.")

ALCOHOL AS A REFRIGERANT. — The present theory of the antipyretic and refrigerant action of alcohol, and one which accords with all the experiments made to determine the physiological and toxic effects, is given below. It is based, in great part, on the chemical experiments of Jaillet, referred to in the foregoing lecture, these experiments demonstrating the acetification of alcohol in the circulating blood, and the destruction of the acetates formed into water and carbonic acid.

Jaillet, after having shown that the oxy-hæmoglobin of the blood is continually undergoing decomposition in the presence of oxidizable bodies, and yielding up to them all its combined oxygen, has made it plain that the blood globule, impregnated with alcohol, transforms the latter into acetic acid during the phenomenon of hæmatosis. In other words, the blood globule, when impregnated with the toxic spirit, has lost the property of transforming all its hæmoglobin into oxy-hæmoglobin, for the oxygen of respiration unites at the same time with the alcohol and the hæmoglobin of the corpuscle. It suffices, in fact, to pass a current of oxygen gas into a certain quantity of blood which has been dosed with alcohol; the blood will presently give the reactions of acetic acid when the proper tests are employed.

We are now in position to explain the refrigeration and other phenomena observed in alcoholic poisoning. We know, in fact, that an animal intoxicated by alcohol gradually undergoes depression of temperature till death ensues. At the necropsy we observe hyperæmia of all the organs, pulmonary apoplexy, and black blood in all the vessels.

(1.) The gradual lowering of temperature is the result of the interruption to the phenomena of hæmatosis caused by the alcohol. Since the blood globule no longer fixes a sufficient quantity of oxygen, it follows naturally that the combustions in the recesses of the tissues are incomplete, animal calorification is imperfect; the result of this incomplete combustion is the accumulation of fatty tissue in alcoholic habituées, and the presence of fat granules in the blood corpuscles.

(2.) The black blood contained in the vessels is the demonstration of the respiratory embarrassment; less oxygen being fixed by the globule less carbonic acid is exhaled. Hence the latter gas accumulates in the blood; there is also increased production of this gas. The acetic acid incessantly formed from the breaking up of alcohol decomposes the alkaline carbonates in the blood, setting free CO^2, and forming acetates, and these latter again undergo transformation into water and alkaline carbonates. In these conditions death is a veritable poisoning by carbonic acid, which determines a progressive slowing of respiration and circulation, and blood stasis in all the organs.

Jaillet thinks that the diuretic action of alcohol is largely owing to the effect on the kidneys of acetate of soda formed during the oxidation of the alcohol.

Jaillet, Bull. de Ther., August 14, 1881, p. 121. Dujardin-Beaumetz, op. cit., p. 99.

Original Articles.

THE OLD AGE OF THE SKIN.[1]

BY JAMES C. WHITE, M. D.

THE skin in old age always undergoes some surface changes due to senile degeneration of its tissues which may be considered normal, for the natural processes of decay or degeneration are as much under physiological law as those of growth and repair. It is also liable to certain special diseases caused by alterations in its structure and functions more or less peculiar to this period of life. The hair follicles are generally the earliest to exhibit indications of the first named condition, either by the failure of the papilla to produce the pigment cells of the hair shaft or by gradually ceasing to form hair tissue altogether. But senile forms of cavities and alopecia often show themselves, of local or quite general distribution, in middle or even early life, long before old age may be said to affect other tissues of the integument or body; manifestations, it may be, that this appendage of the human skin is in process of gradual race extinction upon those parts of its surface also where it still attains its full development. In fact, premature loss of the hair from simple decline of vitality in the power of reproduction in the follicles of the scalp is often coincident with the first period of the most vigorous growth of the beard in full manhood. The changes which take place in such early forms of baldness, not dependent upon positive disease of the cutaneous tissues, and in premature blanching of the hair, are the same as those which occur in advanced age, and which are accompanied by other and marked alterations in the structures of the skin. They are merely a functional decline to manufacture pigment matter and an atrophy of the papilla and productive layers, with a final shrinking of the whole follicle to its condition of second childhood, as a lanugo or empty appendage to the sebaceous gland.

The appearance of the skin in an old person differs from that of infancy and adult life in various ways. It is generally thinner, dryer, paler, rougher, more wrinkled, and in parts inclined to exhibit discolorations and excrescences. The roughness is due to a change in the character of the epidermal cells, by which they lose the power of individual desquamation and collect in masses in places like reptilian scales. This is especially noticeable upon the backs of the hands and face, particularly in persons who have been much exposed to the varying influences of out-of-door life. This tendency becomes so pronounced at times as to give rise to the accumulation of great masses of epidermal cells accompanied by more or less underlying papillary hypertrophy, constituting a special disease, to be hereafter considered, keratosis senilis. The seat of such excrescences is mainly the face, hands, and upper chest. With this thickening there is often associated an excessive formation of pigment, both in its diffused and granular state, not only in the cells of the rete but in the root-sheaths of the hair and in the tissues of the corium as well. Such accumulations of pigmented cells often form marked, deep brown, or black discolorations of considerable extent, of the same level as, or elevated above, the general surface. The scaly and roughened condition of such parts is generally accompanied by a uniform dryness and inelastic state of the skin due to a want of activity of the cutaneous glands. The sebaceous follicles are sometimes found almost wholly atrophied, at others greatly distended and converted into a cyst-like structure and incapable of active secretion. Such dilatation gives rise to the distended openings of the surface and the minute milium-like accumulations seen beneath it. The sweat glands, although their functions are often greatly diminished, are generally found but little changed in structure. This dryness of the surface with the loss of elasticity, due to changes in the corium beneath, dispose the skin to chap easily and to excoriation under trivial injuries. The uniform pallor of the skin in advanced age, although interrupted in some regions by a marked enlargement of the superficial arterioles, is due both to the diminished driving power of the central organ of circulation and to the dilatation of the cutaneous vessels, or the atrophy of those especially connected with the glandular structures. The beautifully serene look of repose of this period of life, poetically attributed to a mind at ease, is in no small measure the result of such physical changes in the texture of the skin. The thinning of the skin is due to a shrinkage in all three of its layers. The cells of the rete are relatively diminished, and approximate in their character those of the horny layer; the panniculus adiposus is often largely absorbed, and the fat cells are not fully distended, and the corium becomes greatly changed throughout. The papillæ flatten down and often wholly disappear, the bundles of fibrious tissue become less distinct, and the fibres themselves infiltrated with granular material, and greatly reduced in size. In another form of degeneration the whole fibrous skeleton of the cutis is converted into a homogeneous, structureless mass, which is brittle and easily split or fissured, the so-called hyaline, amyloid, colloid, or glassy degeneration. In both forms the corium shrinks materially in bulk. With the loss of elasticity and plumpness attendant upon these changes it is not to be wondered at that the skin should present a shriveled aspect or be permanently drawn into small wrinkles, or larger furrows and ridges under the action of its muscles, so that in some persons it presents a remarkable multiplicity and complexity of pattern. Such are the principal, functional, and structural changes in the skin which constitute the condition called *atrophia senilis*, changes which affect every individual during senescence in greater or less degree, and which are to be regarded, therefore, as the normal process of decay.

---

[1] Read at a meeting of the Medical Improvement Society, November 13, 1882.

There are, however, certain alterations in its tissues and disorders in its economy, which must be considered as pathological processes characteristic of this period of life, although not peculiar to it. The most important of these will now be briefly described.

PRURITUS SENILIS.

Pruritus senilis is a very distressing affection. It is a purely subjective condition of the integument, — not attended primarily by any perceptible changes in its structure. The principal sensation is an intense itching, which may be universal or limited to restricted areas. Sometimes a feeling of burning or formication is a prominent symptom. These sensations occur in marked exacerbations, generally most pronounced towards night. They are most always aggravated on exposing the skin while undressing, but sometimes reach their most intense grade when the patient becomes warm in bed, and continue to torment him with intermissions until morning. Generally the itching is much diminished during the day, but may be readily excited by overheating the skin, or by the use of hot or stimulating drinks. Scratching is invariably resorted to for a relief to the suffering, which it affords by blunting for a short time the sensibility of the part. It is performed at times with intense frenzy, not only with the nails but with any more effective weapon at hand, and until a pitch of general nervous excitement is induced resembling the sexual orgasm, and followed by a like reaction and profound exhaustion. As a consequence of such insults and repeated violence the skin, sooner or later according to individual power of resistance, undergoes various changes in its tissues. Its surface presents scratch marks of different depths, or inflammatory lesions of all grades, from the papule to the ecthymatous type, more or less excoriated by direct violence. The hairs upon the extremities are often worn off by the constant friction to the level of the tips of the prominent papillæ, and the skin thus attains a harsh feeling and eventually assumes a dark hue, from the pigmentation induced by the prolonged hyperæmia caused by scratching. The seat of the pruritus is chiefly the extremities, especially the legs, where the vitality of the skin is lowest from the enfeebled circulation. The genital region is also frequently affected, the whole district assuming the most advanced grade of secondary eczematous tissue-changes, with the well-known intense suffering peculiar to these parts in that affection. It is not surprising that with the sleeplessness and constant peripheral nerve agitation attendant upon this disease, it should at times eventually lead to disturbances of the central nervous system and intellectual faculties, and thus react upon the whole economy. It is generally aggravated during the winter season, as are other forms of pruritus, owing to the drier atmosphere, the overheated house, and the rougher texture of the clothing worn next the skin.

The treatment of pruritus senilis does not differ from that in other forms of this neurosis of the skin. The varied list of anti-pruritics offers not a few remedies which, judiciously applied, are capable of controlling in some measure the subjective symptoms of the disease. Their action is always temporary, however, and at times limited to furnishing only momentary relief. Even with this restricted power the patient must often depend upon their constant or intermittent use for his comfort and ability to withstand his sufferings. The use of such applications is often determined by the secondary changes in the skin, the result of long continued scratching before treatment is begun. All grades of eczema may demand their appropriate care before the case is reduced to one of simple pruritus, and sometimes mechanical aids to self-restraint are absolutely necessary in order to obtain any degree of control over it. Among the most reliable anti-pruritic remedies in this affection are carbolic acid, tar, chloral hydrate, camphor, corrosive sublimate, and hydrocyanic acid. They may be applied in several forms, and more or less combined with advantage at times. The most useful formulæ are, perhaps, the following: —

℞ Carbolized and camphorated cosmoline, p. e.
℞ Acid. carbolic, ʒss, glycerine ℥j, aq. calcis, ℥viij.
℞ Ol. cadin. ʒss, adipis ℥j.
℞ Ol. cadin. ℥j, sapon. virid., glycerine, āā ℥ss, alcohol ℥vj.
℞ Chloral hydr. ʒj, aq. camph., alcohol, āā ℥iv.
℞ Chloral hydr. ʒj, acid carbol. ʒss, glycerine ℥ss, aquæ, alcohol, āā ℥iv.
℞ Chloral hydr., camphor, āā ʒj, glycerine ℥ss.
℞ Hydrarg. bichlor. gr. viii., acid carbol. ʒss, aquæ ℥viij., for restricted use.
℞ Acid. hydrocyan. dil. ʒj, emuls. amygd. ℥viij.

They are to be applied in the evening as early as practicable in anticipation of the nocturnal exacerbation, at all events at bed-time, and are to be repeated through the night or at other times, as freely and frequently as may be required to relieve the attacks of itching, without producing so much irritation of the skin that they may not be used as freely at the next application. They are never to be rubbed on or in, but sopped or smeared on so gently as not to excite the cutaneous nerves. If the surface should be overstimulated by them some soothing ointment, as "cold cream" or a very mild oxide of zinc salve (gr. v. to ℥j), may be applied to such parts in the morning. In order that any of these formulæ may not lose their effect by prolonged employment, it is well to change from one to another after a time. It may often be necessary to try several of them before that best adapted to the individual case is found. By their properly directed use alone a life of perpetual misery may generally be changed to one of comparative comfort. Internal remedies addressed to the nervous system for the purpose of blunting or benumbing the peripheral nerves are not advisable, for they must be given in increasing quantities to control the sufferings of the patient, and almost always to his general detriment. Granting that their temporary use is sometimes necessary, chloral and the bromides will be found most effective. It must not be forgotten, however, that they are capable of producing serious disturbances of the skin. The patient's diet should be so regulated that no stimulating substances are taken. No hot drinks are to be allowed, tea and coffee, that is, are to be drank lukewarm, nor any alcoholic liquors after the noon meal. The habit of taking whiskey at bed-time to produce sleep is especially to be prohibited. The patient is not to be permitted to approach the fire of furnace flue, particularly at night when the desire of warming the feet before going to bed is strongly felt by old people. If necessary warmth may be restored to these extremities by a foot-bath. The thinnest old linen or cotton garments should be worn next the skin, beneath the ordinary woolen shirt and drawers. By such means we may generally make the disease at least endurable in every case.

PURPURA SENILIS.

The vessels share in the general enfeeblement of the cutaneous structures in old age. In the most dependent portions of the body they allow their fluid contents to leak, giving rise to a passive œdema of the skin of the feet and lower legs, which may disappear after the horizontal position of a night time. The capillaries undergo dilatation, so that the superficial plexus becomes visible as a greatly magnified meshwork of a deep purple or blue color, as prominent at times as nævus tissue. The varicose condition of the larger veins adds to the difficulties of the cutaneous circulation. Under these circumstances extravasations of blood take place easily, sometimes in the form of minute dots, sometimes in areas of considerable extent and irregular shape, which are reabsorbed slowly, and if of frequent recurrence, are transformed into permanent stains of a reddish-brown or black color. Such deposits of modified blood pigment are of frequent occurrence about the ankles of old people. They often follow, moreover, prolonged hyperæmia dependent upon inflammatory dermatoses (of these parts). Sometimes the hæmorrhage is more general, in the form of the petechiæ and vibices of ordinary purpura, occurring without subjective symptoms or indications of constitutional disturbance, and affecting the whole lower extremities. Such forms, the result of simple loss of vitality during senescence, have been called purpura senilis. It does not differ from the simple purpura of earlier periods of life excepting in its more persistent recurrence. Internal hæmostatics have little influence in overcoming the tendency to local hæmorrhage at this age, and it must be controlled mainly by such mechanical agencies as rest, a horizontal position for the legs, and the constant use of the elastic stocking or rubber bandage.

PIGMENTATION.

Distinct from these permanent stains of hæmorrhagic origin is to be considered another kind of discoloration which often affects the skin of old people. It is a hyperplasy of the natural pigment cells of the rete, and shows itself in the form of more or less circular spots or patches, varying in size from a minute point to a pea or large bean generally, and in color from a yellowish-brown to a deep black. These resemble at times ordinary freckles, when they are not accompanied by any thickening of the cuticle, but as the process continues the whole epidermis thus affected is apt to undergo hypertrophy, so that the spots become elevated above the general surface, forming one of the varieties of keratosis, presently to be considered. The favorite seat of such pigmentation is the backs of the hands and fore-arms, the face and neck. Upon the first-named parts, especially in old men whose lives have been passed in the open air, the skin sometimes presents an almost continuous discoloration of varying intensity by the confluence of individual spots of all sizes. Such spots may form, as we shall see, the beginnings of more serious disturbances, but they may continue to extend or last indefinitely without undergoing farther change as a harmless disfigurement simply. They rarely undergo spontaneous involution. Their depth of color is sometimes obscured by a slight scaliness of surface, but ordinarily, unless the whole epidermis shares in the hypertrophy of the colored cells of the rete, the skin remains smooth. For the removal of these pigment spots no treatment is necessary or possible.

DISORDERS OF THE SEBACEOUS GLANDS.

A false pigmentation is sometimes produced by the sebaceous glands, which, when retaining their activity late in life, often secrete in some parts a modified sebum of a cheesy consistence, which forms upon the scalp a continuous, firm coating, gradually changing by the retention of dirt to a browish or black color, presenting a most unsightly appearance. Similar concretions sometimes form also about the openings of the glands of the face, which may attain a considerable thickness and give rise to bleeding if removed by violence. They are not always to be easily distinguished from other affections of the glands in which a modified cell-growth is transformed into epitheliomatous neoplasm. All such simple collections of sebum may be readily prevented from forming by proper care of the skin, and are easily removed. The scalp should be saturated with sweet oil for a half hour or so daily. A bit of sponge or flannel rag smeared with toilet soap, or dipped in a strong solution of soft soap in alcohol, should then be rubbed into the part, gradually adding water until a thorough lather is obtained. This mixture of fatty scales, oil, and soap is then to be thororoughly rinsed off with much water, and the scalp smeared with lard or vaseline. This is to be repeated daily until the accumulation is entirely removed and ceases to form again. Afterwards the scalp should be washed often enough to keep it active and clean. Upon the face and other parts the concretions may be smeared at night with an ointment (hydrarg. am. chlor. gr. ℈i., vaseline ℥i.), and treated in the morning with oil and soap, as above directed. This course is to be followed until the glands involved return to their healthy action.

That sebaceous cysts, or wens, occur with greater frequency upon the old than upon the young is well known, but they require no special consideration here, as they are in no way peculiar to old age.

KERATOSIS SENILIS.

This affection has been described by Neumann under the name *keratosis pigmentosa*, which is not exact, as the increase of pigment, although highly characteristic, is not always present; and under the title *verruca senilis* by Hebra and Kaposi, which is not correct, as the papillary hypertrophy, the essential element of wart growth, is generally wanting. It first shows itself in the form of collections of scales, hardly elevated above the general surface, of somewhat darker color than the surrounding skin, of an irregularly circular or oval outline, resembling in fact, without close inspection, freckles of light tint. The surface of these spots is sometimes shining and smooth, sometimes dry and covered with minute lightly adherent scales. They attract little attention at first, although seated in greatest abundance generally upon the most conspicuous parts of the person, namely, the upper half of the face and the backs of the hands. They may also appear over more extensive areas, the fore-arms and chest especially. Gradually they become more noticeable by increase of thickness and depth of color, but their development is very slow, and years may pass before they have attained sufficient growth to become troublesome. In their most advanced condition they present elevations an eighth of an inch above the general surface, consisting of dry, horn-like scales, which vary in color from the faintest yellow to the deepest black, and which may be removed with a little violence by the nail or a blunt-edged instrument, leaving exposed a superficial excoriation. Examined by the microscope, according to Neumann, the underlying and surrounding tissues present the ordinary appearances of senile atrophy and an accumulation of pigment in granular form about the vessels. The sebaceous glands are often enlarged, and their mouths plugged or obstructed, so that they project above the surface of the skin in the form of wart-like elevations when the overlaying epidermal scales are removed. The growths differ, therefore, from the true wart in the natural condition of the cutaneous papillæ, the mass of the excrescences being composed of horny epithelial cells more or less pigmented. When fully developed they may be a third or half an inch in diameter, and they have generally a flat surface. They may occur singly or in considerable numbers upon the face or hands, and they often give to these parts an appearance suggesting, in connection with the age of the patient at which they attain their fullest development, the corresponding tegumentary changes in the bark of an old tree. They rarely appear before the age of fifty in numbers, and are seldom very conspicuous before that of sixty-five or seventy. They are much less likely to develop upon persons who have kept their cuticle and sebaceous glands in proper order through life by sufficient use of soap than upon those who have neglected this custom. When very prominent they are easily knocked off, so that the hands especially often present excoriated, bleeding surfaces, when the growths upon them are numerous. The scales, when reproduced, are then more or less discolored by the admixture of blood pigment.

The prognosis in the case of such simple collections of epidermal scales would naturally seem to be most favorable, and so it generally is if treatment be resorted to in good time, but the most simple changes in the cutaneous tissues of the face in old people are always to be held under suspicion. A wart or mole which has existed through life, a more recent accumulation of sebaceous material or of hardened scales, may eventually be transformed into epitheliomatous disease. So this affection is a very common starting-point of this form of cancer. The transition from this simple epidermal hypertrophy to this more serious new-growth is unmarked by any striking change in the condition of the part. The patient's attention becomes finally attracted to the fact that the scaly patch is not as firmly fixed as formerly, or that the tissues beneath are softer or more boggy when it is pressed upon, or that the covering of scales is changing to a crust or scab, which enlarges at a more rapid rate, or that the part is no longer wholly without unnatural sensations. Little nodules begin to appear at its edge, minute globular elevations, containing a soft material resembling milia, which may be squeezed out, and are found to consist of epithelial cells. These in turn become excoriated, and add to the size of the crust. Thus in time a circular, prominent patch, of a dull-red color, consisting partly of scales, partly of crusts, is formed, varying in size from a pea to a dime, and eventually the whole central portion softens and is cast off, leaving a shallow ulcerating surface. Its shape is generally irregularly circular, separated from the surrounding skin in part at times by a slightly elevated, hard border, which overlies a deeper infiltration. Such is the final history of keratosis senilis in many cases, such the beginning of a large proportion of superficial cancers (rodent ulcers) of the face in old people.

In the earliest stages of this affection it will be sufficient to wash the parts daily with soap and water, to keep under restraint the tendency to accumulation of epidermal cells. Generally the use of a little sweet oil, rubbed into the patch and allowed to remain a few minutes before applying the soap, will make its removal easier. When the growths are thicker and firmer, and when there is much pigment change, it is well to use upon them over night some fatty material like lard, or diachylon ointment, in the form of a plaster, and to rub into them in the morning on a piece of flannel cloth some of the strong soaps, like domestic soft soap or sapo viridis, or their concentrated solutions in alcohol. Water is next to be rubbed in until a thorough lather is made, which is then to be washed off. Should any excoriations be thus produced they may be protected by a patch of cloth spread with diachylon ointment until healed. In this way the ordinary growths may be gradually thinned and made to disappear, but the parts will always require extra care and washing subsequently. If the epidermal masses are unusually prominent, or if the sebaceous glands are involved to any great degree, severer measures are called for. Concentrated nitric acid may be repeatedly, if necessary, bored into the underlying tissues upon a sharply pointed stick, or the sharp spoon or curette may be used to scrape out at once all diseased elements. As soon as any suspicion of transition to epitheliomatous growth arises, the part should be dealt with according to the rules for treatment in that affection, which, however, is one in no way peculiar to old age, and therefore not to be here considered.

◆

SOME STATISTICS AND OBSERVATIONS CONCERNING LACERATION OF THE CERVIX UTERI, AND ITS TREATMENT.[1]

BY F. H. DAVENPORT, M. D.,
Assistant Surgeon to the Free Hospital for Women

I HAVE thought it might be of interest, and possibly of some value, to tabulate some statistics with regard to the operation for laceration of the cervix as performed in the last six years at the Free Hospital for Women. I am well aware that it is a subject about which a great deal has been written and discussed, and that at present it is receiving fresh attention in societies and medical journals. This is perhaps due to several causes.

In the first place the operation is still of comparatively recent origin, and many points in its pathology are still obscure. Indeed, Dr. Emmet himself, the author of the operation, has recently modified his views as to the cause of the eversion, and in a most interesting discussion at a meeting of the New York Obstetrical Society many new ideas were advanced.

---

[1] Read before the Obstetric and Gynæcological Section of the Suffolk District Society.

In the second place the operation has now reached a stage where it is on trial in England and on the Continent. The prevailing sentiment in European countries has hitherto with but a few exceptions been opposed to it, as unnecessary, and even unwarranted. It has been the fashion to ridicule it. But the operation is beginning to win favor even in conservative England. In the latest English book on Diseases of Women by Dr. Edis, the whole subject is fully and impartially discussed, and its performance in suitable cases warmly advocated.

The operation has then passed the stage of its first enthusiastic reception by the profession, has gone through the period when it was liable to be performed frequently on insufficient grounds, and is now being judged more impartially and fairly.

The method of operation except in peculiar cases can hardly be said to be a matter of great moment, provided whatever method is used is carefully carried out. Whether we use silver or iron wire, silk or catgut as sutures, whether we denude with scissors or knife, whether we do it with or without carbolic spray, or with irrigation, are points of less importance than that we denude thoroughly, bring the parts in careful apposition, and have our instruments and sponges surgically clean. More important questions than these to discuss, because less definitely settled, are what cases need the operation, what are the contra-indications, and what should be the after-treatment. These are points which the more careful study of cases is gradually helping to elucidate.

There have been in the Free Hospital for Women from November, 1875, to March, 1882, 495 patients. This is not a large number, but they have been admitted as they presented themselves or were recommended, without regard to whether they were operative or non-operative, acute or chronic, and hence may be assumed to fairly represent the average gynæcological practice. The diagnosis of laceration of the cervix uteri was made sixty-three times. There have been 423 out-patients seen at the hospital within the last three years, and of these seventy-six were found to have more or less extensive laceration of the cervix. In a total of 918 cases we find 139 with this lesion, or 15.1 per cent. This is by no means so large a percentage as has been stated by many writers on the subject, and certainly differs widely from the general impression of the profession as to its frequency. Dr. Coghill, in an address on Obstetric Medicine before the British Medical Association in 1881, says: "It is very rare to find a multiparous cervix in any other than a dilapidated condition, with more or less laceration." It agrees singularly well, however, with the result which Dr. Emmet arrives at from his cases, that a little over sixteen per cent. of all women who had passed under his observation, were found to have had laceration of the cervix.

Of the 495 patients in the hospital 183 had borne children, and of the 423 out-patients, 213. That gives among those who had borne children a percentage of 28.8 per cent. of cases of laceration. Emmet's percentage is rather higher, 32.8 per cent.

These proportions are not materially changed if we make use of a still larger number of cases. Dr. W. H. Baker has kindly allowed me to include in this summary the cases which have occurred in his private practice. Of 992 patients, 456 had borne children, and in 135 of these last, laceration of the cervix was found, which would be 13.7 per cent. of the whole, and of those who had had children, 29.6 per cent. As the result of the whole number of cases, over 1900 in all, we find that 14.4 per cent. of all cases that have come under observation have had laceration of the cervix, and of those who have borne children, 30.4 per cent., or nearly one in three.

We will now consider more particularly as regards the operation those cases which have occurred at the Free Hospital. In a certain proportion of them the lesion was slight, and did not call for operation, and several patients left the hospital, not consenting to the operation when it was advised. In all there have been forty-two operations performed on thirty-seven patients, in four instances a secondary operation being required, as the first was not a complete success, and in one case a third even being necessary. Of the thirty-seven cases where the operation was performed, fifteen had had one child, eight two, six three, four four, and one each five, six, seven, and ten. Twelve had had miscarriages.

The direction of the laceration was not always indicated in the records. As far as noted there were seven to the left, seven to the right, seventeen bilateral, and two stellate. This does not agree with what is generally taught, that laceration to the left is much more common than to the right. It does, however, show that a bilateral tear is more apt to give rise to symptoms than a unilateral one, as it often happens that no eversion occurs when the tear is confined to one side. Goodell,[1] in a late paper on the subject, states that he operates only when they are bilateral.

All the operations were done under ether, with the patient on the side, in the semi-prone position, and many of them under carbolic acid spray. The denuding was done with knife or scissors as seemed most convenient, and silver wire was used, except once or twice in a secondary operation, when catgut was employed.

The after-treatment is simple, but certain precautions are used to prevent too much motion on the part of the patient. She is kept quiet on the back for the first few days, after which she is allowed to move carefully to one side or the other. The knees are tied and flexed, and a roll placed under them as a support. After forty-eight hours the vaginal douche is given night and morning. The catheter is used until the stitches are removed, except that the patient may be allowed to pass water while the douche is being given.

It has been claimed that the operation is in itself so simple that such precautions as to quiet are unnecessary, and that the operation might be performed without ether in an out-patient clinic, and the patient sent home in a carriage. Not feeling justified in dispensing with all precautions, we nevertheless allowed one patient to sit up on the third day, and to take solid food, but a sudden rise in the temperature to 102° F., a temperature which repeated itself on three successive evenings, a somewhat longer convalescence, and the failure to obtain perfect union, were sufficient reasons for returning to the more tedious but certainly safer plan of treatment.

The bowels are kept confined until a day or two after the stitches are taken out, and are then moved by injections of sweet oil at intervals of two hours, followed by an enema of warm water.

---

[1] American Journal of Obstetrics, January, 1882.

As a rule the stitches were removed on the eighth day. When the menstrual flow came on earlier they were left in some days longer.

The results in the forty-two operations were as follows: perfect union in thirty; failure of one or more stitches to unite, but not sufficient to need a secondary operation, eight; four needed a slight secondary operation. In seven of the twelve cases, where the operation was not absolutely perfect, the menstruation came on, making it highly probable that its occurrence interfered with union.

For thirty-eight of the cases there are temperature charts. These show that in twenty-one of the cases, just fifty per cent., the temperature did not reach 100° F. at any time; in eleven the highest point was between 100° F. and 101° F.; in six the highest point was 101° F. and a fraction, and in two cases it reached 102° F. One of these last cases was the one where the patient was allowed more freedom; in the other it touched 102° F. one evening, and then rapidly subsided.

In not a single case was the operation followed by an attack of pelvic cellulitis or peritonitis. In one case, reported by me before the Suffolk District Society, two years ago, the operation was followed several weeks later, after the patient had gone home, by phlebitis of the left leg.

One great inconvenience formerly was the irritation of the bladder, often amounting to cystitis, which was induced by the use of the catheter. At present that is avoided, and usually successfully, in two ways. In the first place, as soon as the vaginal douche is given, after forty-eight hours, the patient is allowed to pass water at that time, thus making only one or two catheterizations a day necessary. In the second place, as soon as the bladder becomes at all irritable, and the urine neutral or alkaline, benzoate of ammonia is given frequently in doses of from thirty to fifty centigrammes. This controls the irritability better than anything else which has been tried. When the urine is acid, citrate of potash will sometimes prove of service.

The limits of this short paper will not admit of touching on a great many points of interest in connection with this subject, such as the necessity in a great many cases of preparatory treatment, the modifications in the operation which are necessary when the lips are much hypertrophied, the effect of displacements on eversion, the connection between eversion and cellulitis, and many other questions of pathology which are being gradually elucidated as time goes on. The few facts which I have presented will, perhaps, serve to show the frequency of the affection, and lead, in suitable cases, to the performance of the operation as a radical cure, instead of attempting what must be merely a palliative measure, the healing over of the everted and eroded cervical mucous membrane. Any one who has tried to heal permanently a bad case of lacerated cervix with the use of astringent applications, or, worse still, has seen the disastrous results of the use of caustics, will, I am sure, welcome this operation as a shorter, more rational, and sure method of treatment.

— Mark Gray, the would-be assassin of Edwin Booth two years ago at Chicago, has been released from the Illinois Insane Asylum on a habeas corpus.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

NOVEMBER 13, 1882. DR. J. C. WARREN presided. DR. J. C. WHITE read a paper entitled

THE SKIN OF OLD AGE.[1]

DR. MINOT stated that he had found the application of borated cotton in a severe case of pruritus ani of the greatest service, and he also mentioned other cases where it had been found to be valuable.

In answer to a question from Dr. F. C. Shattuck, DR. WHITE said that he had never given arsenic in cases of senile pruritus.

DR. WARREN spoke of the success attending the treatment of warts with preparations of salicylic acid.

DR. WHITE said that he had tried it in various forms of keratosis, and that the effect is good where there is merely an accumulation of epidermal cells, but if there is an inflammatory condition below it has little effect. In warts where the papillæ are hypertrophied it will remove the epidermal layers, but they will soon return, and on flat epitheliomatous disease he had tried it without success.

DR. WARREN spoke of destroying effectually epithelial growths, when removal is attempted by escharotics, and not applying mildly, which merely stimulates the growth and changes the slighter forms of epithelial disease to those of deeper growth. He also described the method employed by him for removing these growths, namely, the curette, followed by nitrate of silver where the gentle scraping of the curette did not reach. Where large surfaces are involved it is advisable to give ether and use a larger curette, followed by the actual cautery. In this way an extensive cicatrix is avoided, which is especially important when the tissues around the eye are affected.

DR. F. C. SHATTUCK reported the following case, with autopsy: —

CIRRHOSIS OF THE LUNGS. ENORMOUS CAVITY. HYPERTROPHY OF THE RIGHT VENTRICLE.

J., a shoeblack, twenty-seven years of age, was sent to me by Dr. James J. Putnam, December 11, 1880. His father died of "abscess of the lung," his mother of consumption. His brother, his wife, and several children also succumbed to consumption. The patient lost a brother with the same disease last summer, and has another brother, a hard ticket, who suffers from cough. The patient is sufficiently intelligent, and states positively that he has never been free from cough since he had measles when five years of age. He has always taken pretty good care of himself, except during a short period some years ago, when he smoked and drank to excess. Gave up the use of both tobacco and alcohol about a year ago, without benefit as far as he can see. For many years he suffered from gradually increasing dyspnœa on exertion. Has had a number of attacks of moderate hæmoptysis and one profuse one. Seven years ago consulted one of our most prominent physicians, and was told by him that both lungs were affected, and three years ago obtained a similar opinion from another gentleman of the highest standing. Has never been confined to bed for a whole day, and has worked most of the time, his stand being in a narrow, damp alleyway between high buildings, where the sun scarcely ever penetrates. Of late he has not worked in the worst weather.

---

[1] See page 484 of this number of the JOURNAL.

He complains of shortness of breath on exertion, and reports that he cannot sing or speak continuously by reason of his dyspnœa. Suffers also from severe pain in the cardiac region, shooting through to the back at times. Expectoration is abundant, sometimes yellow, sometimes white, never fetid as far as he knows. The breath is not offensive. The expectoration is sometimes evidently from a cavity, several ounces of white sputum being rapidly ejected, after which he has immunity from cough and expectoration for a time. The appetite is fair, the digestion easy, and the bowels regular. Is forced to rise several times every night to urinate, and micturition is frequent also during the day, but no great quantity is passed at a time. This symptom disturbs him at night more than his cough.

Urine. Specific gravity 1020; no albumen; nothing remarkable under microscope.

The patient is small of stature, but sufficiently well nourished, and has a fair muscular development. The ends of the fingers and toes are markedly clubbed, and the nails incurved. Slight exertion provokes marked dyspnœa, but when at rest he would not strike one as a sick man. The pulse is 96, regular, and the skin is natural to the touch.

Marked dullness on percussion over both apices front and back, especially the left, and under the left clavicle a metallic clang. The dullness diminishes over both fronts downwards, and over the bases is not remarkable. Marked dullness over left lower back; fair resonance over right.

Over the left apex the respiration is cavernous, without bronchophony or whispering bronchophony, but metallic tinkling is occasionally heard over the whole left front as well as over the apex. The left supraspinous fossa corresponds in every way with the infraclavicular region. At the left base in the back respiration is tubular; over the other region of the left chest the respiratory murmur is extremely harsh and often jerky. Abundant coarse râles are also heard.

Respiration is rude at the right top in front, with coarse dry and a few fine moist râles. In the right supra-spinous fossa very abundant fine râles, obscuring the respiratory murmur. Both front and back the respiration improves in quality from the apex down, and the fine râles disappear.

The heart sounds are very loud all over the lower left front, and the second sound is very strongly accentuated over the pulmonic orifice.

I made the diagnosis of cirrhosis of the lung, with bronchiectatic cavity and enlarged right heart.

He was given digitalis and cod-liver oil, under which his pulse came down to 84, and his symptoms improved decidedly, the pain in the cardiac region disappearing, and the dyspnœa diminishing somewhat.

After a month or two I lost sight of him, and did not see him again till November 10, 1882, when he summoned me.

Three days previously a profuse hæmorrhage had set in, and he had been raising blood very freely ever since. I learned that during the last two years his dyspnœa had been gradually increasing, but that he had been up and about constantly. For the last six months he has been unable to work at all, and, after a short walk on level ground from the horse-car to his house, he has often been obliged to sit on the door-step for half an hour before he could get sufficient breath to mount one short flight of stairs.

When I saw him he was pale, very restless, sitting up and leaning forward in bed, and suffering from intense dyspnœa Every few moments he raised some blood mixed with purulent matter, apparently, and a vessel under the bed contained nearly a pint of similar sputa raised during the last five hours. The pulse was quick and small; he could take scarcely any nourishment, and begged for sleep. He was in no condition to submit to a complete physical examination, but putting my ear to the left lower back I heard very loud amphoric respiration. He had been seen by another physician, who had prescribed ergot, but his stomach could not retain it.

The extent and hopeless character of the disease and the suffering of the patient seemed to me to warrant the administration of an opiate in spite of the danger of opium where so little healthy lung tissue remains and the blood comes apparently from a pretty large vessel. I accordingly gave him a sixth of a grain of morphia in pill, and ordered mustard to the chest with hot water to his feet. Soon after taking the pill he became more comfortable, the cough diminished, and he got some sleep. At ten P. M. he died quietly, nine hours after my visit.

Autopsy, eighteen hours after death, by Dr. Cutler. There was no marked disparity between the two sides of the chest externally; the tissues were very bloodless; the position of the diaphragm was normal; the heart lay in its usual place. The left pleural cavity was obliterated, and the left lung was practically an enormous cavity partially divided into compartments. Some of these compartments were evidently dilated bronchi, and the whole was filled with an offensive fluid containing much blood. The right lung was adherent about the apex and posteriorly somewhat lower down, was very voluminous and emphysematous. The apex was indurated, and the upper lobe contained several caseous masses, while in the posterior portion of the lower lobe was a cavity the size of the fist, lined with pyogenic membrane. No tubercles were seen anywhere. The pericardium contained a slightly increased quantity of serous fluid, and the right ventricle was very greatly hypertrophied, so much so that its walls were scarcely thinner than those of the left ventricle, and remained rigid when the ventricle was opened; at least half of the volume of the heart was formed by the right side. The valves were healthy. There were some old adhesions about the liver and spleen, but those organs appeared healthy. The other organs and the brain were not examined.

To sum up: a man of twenty-nine has almost completely lost the use of his left lung, which contains an enormous cavity, while the right lung has been invaded to a considerable extent. He gives a history of constant cough and expectoration, with gradually increasing dyspnœa since he had the measles at five years of age, and yet he has never been laid up a whole day in bed all this time; has been practically free from fever, and is very fairly nourished. What a contrast between this case and one of ordinary consumption!

Some gentlemen may remember a man whom I showed at this Society two years ago, and whose organs were exhibited at a later meeting.[1]

---

[1] Vide JOURNAL, 1880, vol. cii., p 240.

The two cases illustrate two of the different methods by which cirrhosis of the lung may originate. The case of 1880 began apparently as one of ordinary phthisis, in which the pneumonic element was after a time arrested, but the fibroid element progressed. With increasing dyspnœa, due to the advancing destruction of the air vesicles, he gained many pounds of flesh, and died of thrombosis of the pulmonary artery. The disease in our present case was the consequence, probably, of lobular pneumonia and atelectasis complicating measles at five years of age. I have recently seen two other cases which seem to have originated in and followed croupous pneumonia. The books speak of the thick, false membranes which sometimes remain after the fluid part of a pleuritic effusion has been absorbed as occasionally furnishing the starting-point for an interstitial process in the lungs; I do not recall having met with one of these cases.

Cases similar to this just reported are very interesting on account of the great disparity which exists between the physical and the rational signs. Physical exploration reveals more or less disorganization of the lungs while the nutrition of the patient may be excellent, and his chief complaint is apt to be of shortness of breath on exertion.

In reply to Dr. Bowditch, who asked why the disease should be called cirrhosis, Dr. Shattuck said that he did not especially hold to the term "cirrhosis." He had called the other case to which he had alluded "fibroid phthisis," and the disease has been called also interstitial phthisis, Corrigan's phthisis, and even chronic pneumonia. The point which he wished to bring out was that in these cases the lungs are destroyed by a slowly advancing connective tissue growth, the tubercular and pneumonic elements of phthisis being very subordinate or even almost entirely absent. Cirrhosis of the lung is at one end of the scale of which galloping consumption is at the other, and in between we have mixtures in every possible varying proportion; in general terms, the more chronic a case of phthisis the greater the amount of connective tissue growth. The dilatation of the bronchi, so often met with in these cases, and so well marked in that under consideration, has usually a mixed causation, the chief factors in which are persistent cough, the contraction of connective tissue up to a certain point as it grows older, and the effect of atmospheric pressure in preventing a vacuum within the chest. As the lung tissue wastes the space which it occupied must be filled either by the falling in of the chest wall, which of course has its limits, or by the dilatation of the bronchi. The same force which dilates the bronchi acts also, though in a far less degree, to dilate the blood-vessels; hence the comparative frequency of little aneurisms in the lungs in these cases.

Dr. Warren asked how Dr. Shattuck thought opium could do harm under such circumstances.

Dr. Shattuck said that it seemed as if the benumbing effect exerted by opium on the respiratory centre might result in an accumulation of the blood as poured out, its insufflation into the sound pulmonary tissue, and thus contribute to death by suffocation.

Dr. Fitz asked if opium was not the most efficient method of stopping the hæmorrhage, by quieting the nervous excitement of the patient.

Dr. Shattuck expressed his entire agreement with Dr. Fitz as to the great value of morphia in cases of hæmoptysis such as occurs early in the course of a phthisis. The only question in his mind was whether astringents, ergot, etc., should not be pushed, if possible, when the blood seems to come from a cavity; in these cases the bleeding is not from capillaries, but from larger vessels, as a rule, and it would seem to be desirable to do something more, if one can, than simply to allay nervous excitement, and, by allaying the cough, restrict the movements of the chest. Dr. Shattuck now regretted that he had not, by placing ligatures high up on the extremities, sought to obstruct somewhat the return of venous blood to the heart. Dr. H. Holbrook Curtis, in a recent number of the *New York Medical Record*, reports a case of pulmonary hæmorrhage, where this method succeeded brilliantly in checking the bleeding after other means had signally failed.

Dr. Fitz pointed out the fact that such a variety of drugs had been used at different times to arrest hæmorrhage, that they probably did not any of them have much direct effect on it.

SCARLET FEVER AFTER CONFINEMENT.

Dr. J. B. Ayer reported the case of a lady, twenty-five years of age, whom he had attended in her second confinement.

After an easy labor she did well until the third day, when a slight erythema was noticed upon the chest, accompanied by a moderate amount of febrile disturbance.

Redness and fever increased next day (temperature 102.5° F.), and on the day following the disease reached its height, a large portion of the body being involved; the temperature 103.4° F.

On the fifth day the fever subsided, and the eruption had partly faded. Desquamation continued upwards of a fortnight.

Excepting a very offensive vaginal discharge there was nothing in this attack of scarlet fever peculiar to the puerperal state. Contrary to usual experience it was mild and uncomplicated.

The baby nursed the breasts, though at times there was insufficient secretion of milk. At the beginning of desquamation the baby fretted, and a slight erythema was noticed upon the body, whether scarlatina or not it was impossible to decide. The symptoms were very mild, and there was no desquamation. There was no history obtainable of exposure to scarlet fever. The disease is very rare in pregnancy, but much more common in the puerperal state, giving origin to the theory that the period of incubation in pregnant women may be prolonged until after confinement.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

OBSTETRICAL SECTION.

BY J. B. SWIFT, M. D., SECRETARY.

May 4, 1882. Dr. Francis Minot presented two cases of

PUERPERAL SEPTICÆMIA,

which had been previously reported at the Obstetrical Society, and are published with the report of that Society.

Dr. Harlow asked if the first case was considered as one of scarlatina?

Dr. Minot replied that he did not consider it as such. There was a rash with sore throat but no other symptoms. The child was not affected, nor any other person in the house.

Dr. J. P. Reynolds said that the first and most obvious inquiry in regard to the paper just read was, whether the two cases were fairly entitled to be called instances of septicæmia. The heading of the essay naturally prepares us for an account of acute septicæmia with all the terrible history of that disease, or at least for cases of some severity, even if they be of longer and more moderate development. There had been but little continuance of febrile symptoms in either patient. Was not the mammary disturbance mentioned in the first instance, and the threatening of phlegmasia dolens in the other, possibly enough to explain the general symptoms? He did not, however, wish to be understood as opposing that view which explains many cases of phlegmasia dolens as extension of morbid changes, severe or slight, in the pelvic connective tissue, along the course of the femoral vessels; nor to deny that at times even the connective tissue of the breast may be invaded by disease of similar history and development. Possibly we may all before very long be forced to admit the septic origin of ailments even of this class. Replying to a question of Dr. W. L. Richardson the speaker would not ascribe every acute disturbance in the health of lying-in women to septic influence. And yet if we acknowledge that, in the severer forms, parts remote from the pelvis are not infrequently invaded, why may not such results also attend the milder attacks? In these cases we can seldom have the witness of post-mortem appearances.

We ought not to overlook the statement, that in many, perhaps in most, instances of phlegmasia dolens, the cardinal fact is such a diseased process as that which has just been suggested, to which the obstruction in the vessels is only subordinate and secondary. In by far the greater number of patients it is by the route of the connective tissue, and not through the uterine cavity, that the invasion of puerperal disease takes place; and to make this possible we need only that septic material be found in the neighborhood of some fresh, non-granulating wound or tear.

Dr. E. M. Buckingham inquired if the patient had been exposed to cold in any way? The sore throat at the time of year might be explained in that way.

Dr. Minot did not think so; care had been taken against exposure to cold, and there was an open fire always in the room.

Dr. Buckingham asked if Dr. Minot made it a routine practice to give carbolized vaginal injections in all his cases.

Dr. Minot replied that formerly he had done so, but after two cases with alarming symptoms following their use, he had abandoned the practice except in cases where the lochia were offensive. In the cases reported this evening no injections were given until the lochia became offensive.

Dr. C. M. Green said that he was not aware it was commonly supposed that phlebitis was due to septic origin. He spoke of two cases which he had seen where there was extensive phlebitis, but did not regard it as due to septic poison in either case. He thought that the thrombosis was due to the condition of the blood, it being laden with effete material, watery, with an excess of fibrine, this condition being favorable for the formation of coagula.

Dr. Sherman asked whether Dr. Minot had any other cases of a septic or contagious nature at this time, and also, if the length of time after delivery had any influence on the diagnosis of septicæmia.

Dr. Minot replied that he had no contagious diseases under treatment at that time, nor any surgical cases. He thought it was generally considered that septicæmia set in earlier after confinement than in these cases.

Dr. Green spoke of an article he had seen recently in which it was thought, if the emunctories were not in good order, with the bowels confined, the patient might be poisoned by the effete material in the system, and not by absorption from the genital tract.

Dr. G. H. Lyman thought that Dr. Minot's diagnosis was the correct one. The symptoms could not be explained in any other way. The rigor was severe; it was too late for so-called milk fever; the rash, the sweating, the hectic every evening, were all symptoms pointing to septicæmia. Had they been his cases he certainly would have regarded them as of that nature. Septicæmia was not always due to absorption from the uterus, but the poison might enter by other channels.

Dr. W. L. Richardson thought that every one admitted the septic origin of phlegmasia dolens. A phlebitis such as Dr. Green had spoken of was not necessarily of septic origin, but a phlegmasia was.

Dr. Cobb asked the treatment in these cases.

Dr. Minot said the treatment in cases like these, not of a grave character, would be to relieve the symptoms as they arose. In the first case he gave three drops of tincture of aconite every hour. After three doses sweating came on, the symptoms were alleviated, and the medicine was suspended. He also gave acetate of ammonia and laxatives, and was careful about the diet. In the second case the patient had a good appetite, slept well, and was without pain. The first patient had a great deal of pain, especially in the limbs, so much so as almost to prevent her moving them. It was not in the joints, but was rather muscular.

Dr. F. H. Davenport spoke of the alarming symptoms in connection with the vaginal injections, and asked if they were considered as due to the entrance of water into the uterus?

Dr. Minot said he considered them as due to that cause. The patients had used the injections before, and on these occasions they had been given with equal care. There was a sudden sharp pain in the abdomen, and the patients collapsed, but soon recovered.

Dr. Davenport said he had seen the same symptoms in non-puerperal cases, and therefore always stopped up the central hole in the vaginal nozzle.

Dr. Richardson said that vaginal injections were always given at the Lying-in Hospital. Their nozzles were always made without the central hole. Formerly they used the ordinary nozzle, and then there had been unpleasant symptoms in a few cases. Since they had used the nozzle without the central hole they had not had a case.

Dr. Lyman asked if after delivery the axis of the uterus did not lie in such a position that the stream from the central hole of the nozzle would not strike the os?

Dr. Richardson did not think so. He thinks the stream might strike the os, but regarded it as a rare accident. In thousands of cases of vaginal injections he never saw the slightest trouble follow their use, the central hole being closed. He has seen symptoms similar to those of anæmia of the brain in cases of intra-uterine injection. When the water was very hot, 120° F. These soon passed off, however, and if the temperature was reduced to 110° F. there was no ill effect.

In closing the discussion DR. MINOT said that the idea of the first case being due to mammary disturbance could not be held, for lactation had been established and the child had nursed. The first symptoms occurred eight days after confinement. There were no serious symptoms until the eleventh day; then, with the other symptoms, the patient had some pain, but no hardness, in one breast, but it soon passed off. Twelve days after confinement she had a rigor, lasting twenty minutes, and then the milk stopped.

As to the diagnosis there may be a difference of opinion. For his part he has no doubt of its being septicæmia. All the symptoms pointed to it. He spoke of a fatal case, in which the autopsy showed septic absorption about the uterus, and the hygienic condition of the house was very defective. In both the cases reported the patients' rooms communicated with water closets. In both cases there was an open fire in the lying-in room, and he thinks the patients owe their lives to this fact. He spoke of the importance of making an examination of the premises before a case of labor, and said he would always have an open fire-place in the lying-in room.

LACERATION OF THE CERVIX UTERI.

DR. F. H. DAVENPORT read a paper entitled, Some Statistics and Observations concerning Laceration of the Cervix Uteri and its Treatment.[1]

In opening the discussion, DR. MINOT said he was surprised to hear that so many precautions were taken in the after-treatment. In the cases upon which he had operated, he merely kept the patient in bed, and only used the catheter when necessary. His experience was limited, but he had obtained perfect union in every case but one, and in that case there was a bridle which seemed to answer every purpose. He never tied the legs together. A cathartic was given before the operation, and a laxative two or three days after, if necessary.

DR. C. M. GREEN thought the operation had often been resorted to unnecessarily, but that in suitable cases its performance would cure or prevent a long train of otherwise intractable symptoms.

DR. W. L. RICHARDSON spoke of a case of bilateral laceration which had been operated upon by Dr. Baker with perfect union. He took care of the patient in her first confinement after the operation, and carefully watched the dilatation of the os. Noticed a slight laceration recurring on the left side of the cervix, which two weeks after delivery could not be found.

DR. GREEN had charge of the same patient in her next confinement, and noticed the same laceration which Dr. Richardson had spoken of.

DR. CHENERY asked if there were any accidents connected with these cases, as cellulitis, and also inquired as to the cause of the cystitis following the operation.

DR. DAVENPORT replied that in none of the cases was there any cellulitis following the operation. He thought that the cystitis was caused by the nurses, who, in introducing the catheter, would often slip it into the vagina in attempting to find the meatus. It was the custom at the hospital to keep the catheters carbolized, and the nurses were instructed not to pass the catheter beneath the clothes, but to always see where it was going.

DR. MINOT suggested the use of iron wire for sutures in operations on the cervix and in lacerated perinæum after labor, the advantages being: its fineness, so that a small needle can be used; it is stronger than silver wire of the same size, and so flexible that a knot can be tied in it; it keeps its hold perfectly, does not corrode, and is cheap.

DR. LYMAN thought the operation had been abused. He sees many cases of even bilateral laceration where he does not advise the operation. He makes it a rule not to operate unless there is eversion of the lips. Very extensive laceration may exist without any eversion, the symptoms being due to something else. He cited a case which had come from a long distance, the patient being in a miserable condition, with a profuse leucorrhœa. Found a lacerated perinæum and cervix. She was suffering from an extensive acute eczema at the same time, for which she was under treatment. He advised no operation at that time, but thought she would come to it. Ordered tonics with a regulated diet, and vaginal douches. Being cured of the eczema she went home, returning to Boston last fall, all her uterine symptoms having disappeared. An examination showed that the enlarged uterus and cervical lacerations had contracted without an operation. Had had another case very similar. Patient was anæmic, nervous, and debilitated with a profuse leucorrhœa. Did not consider her in a suitable condition to be operated upon, and put her upon treatment preparatory to the operation, but she improved so much that he did not eventually deem the operation necessary. At the present time, after a lapse of nearly two years, she seems perfectly well.

He has operated on a good many cases, and once had a bridle form such as Dr. Minot had described. As it held the edges well he let it alone. Does not keep the patient in any particular position, but merely keeps her comfortable. Catheter is not used unless called for. Generally speaking, nothing is done, but quiet in bed, with weak carbolic douches. Authorities say that in subsequent confinements patients always did well.

An important question has arisen in connection with this trouble, namely: Is laceration of the cervix a point of departure for epithelial disease? Many cases seem to show that it is. Dr. Lyman thinks it a very dangerous condition for a woman to be in, and therefore would advise the operation when the laceration looks irritable or there is ectropion of the cervix.

The indications for the operation are an enlarged uterus, causing bearing down pains, reflex symptoms, neuralgia about back of neck, flatulence, constipation, generally poor health, a profuse leucorrhœa, with the lips of the cervix everted and eroded.

DR. CHENERY asked if subinvolution of the uterus would not cause these symptoms. He had a case where there was also a lacerated perinæum, which had never been attended to, which had the symptoms enumerated by Dr. Lyman. An examination showed an enlarged uterus and congested cervix with everted lips. He thought that involution had never taken place. Did not think there was sufficient laceration to cause the eversion, but rather thought the eversion was caused by the subinvolution.

DR. LYMAN said subinvolution would cause the same symptoms, but thinks that the uterus remains enlarged an account of the irritation of the laceration. If the eversion is rectified by an operation, the subinvolution will be cured in the majority of cases.

---

[1] See page 487 of this number of the JOURNAL.

◆

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

FREQUENT AND PAINFUL MICTURITION FROM VASCULARITY OF THE NECK OF THE BLADDER.

April 15, 1882. **Dr. Baker** described the disease, its symptoms and treatment, and gave illustrative cases.

In answer to Dr. Minot, Dr. Baker said that the urine was received from the fistulous opening in the bladder either into a common rubber urinal or into Skene's urinal, a hard rubber cup which fits over the fistula in the vagina and carries off the urine by a tube.

In one instance a soft Meigs' rubber ring was worn, to which a condom was attached by being sealed all around the edge of the ring. In many other cases where the skin was tough the oxide of zinc ointment was applied, and the patients simply wore napkins; in the case of some nervous individuals ninety or a hundred thick napkins becoming saturated in a single night.

In answer to Dr. Reynolds, Dr. Baker stated that most of the cases had arisen after very prolonged retention of the urine, two of the instances occurring immediately after marriage. In another instance there was a similar history, complicated by extreme constipation.

In answer to Dr. Boardman, Dr. Baker said that in all the cases he had seen at least a year had elapsed before they had come under his observation.

Dr. Boardman said he had never dilated the urethra, but had had some cases in which dilatation had been performed, and in these there was a constant desire to micturate, or inability to retain the urine. He could recall cases in which he had assumed the existence of an irritation of the urethra, similar to that described by Dr. Baker, cases due to violence in the newly-married, etc. These troubles had subsided with the removal of the cause, rest, and mild means. If such cases had undergone treatment at some hands there might have resulted a condition of things which, possibly, would require such treatment as Dr. Baker had found necessary in the cases detailed by him. It would seem as if temporary retention of the urine would hardly give rise to changes in the urethra sufficient to call for such extreme measures as Dr. Baker had taken.

He also inquired of Dr. Baker why it was necessary to keep the fistula open for so long a period, or rather how he determined the proper time for closing it.

Dr. Baker remarked that these cases should not be confounded with the frequent micturition arising from too concentrated urine or the extension of an inflammatory process from other parts. Such cases would easily get well with appropriate measures.

VENTILATION IN THE LYING-IN ROOM.

Dr. Minot reported the following cases: —

I. A lady was confined for the second time March 25, 1882. The labor was normal. She did well till April 2d (eight days), when the lochia ceased to flow, and she complained of a feeling of weight in the pelvis, with some pain. A hot vaginal douche was given. The flow returned, but it was scanty and continued so till April 5th, when it stopped. She felt no special inconvenience till twenty-four hours afterwards, when she had a rigor, lasting twenty minutes, with a temperature of 105.4° F. The next morning, April 7th, she complained of sore throat. The soft palate was red, and a red rash, resembling that of scarlatina, was observed on the cheeks, neck, and hands. She vomited. There was some pain and tenderness, but no hardness in the right breast. At noon there was a profuse sweat, and the lochia returned, though scanty. (Three drops of tincture of aconite every hour.) She had some vomiting in the night, but awoke on the 8th feeling much better. She had taken three doses of aconite. Pulse, at nine A. M., 104; temp. 99.8° F. She then complained of much pain and stiffness in all the limbs, so that she could hardly move them, and this lasted for several days. The rash and the sore throat disappeared. The secretion of milk, which had been abundant, ceased, and did not return. She improved rapidly and was well in a few days. She had not left her bed previous to the attack. She had no pain or tenderness in the region of the uterus.

This patient was perfectly well before her confinement. She lay in the same room in which she had been confined fourteen months before, when she did well. The room communicates by a door near the bed with the bath-room, in which there is a water closet and a "set basin," but there was an open fire always burning in the chamber, and everything about the plumbing and drainage was believed to be in good order. After the first symptoms the door was closed and kept locked.

II. A patient was confined for the second time March 27, 1882. Her first labor, which took place in the same room, was not followed by any untoward symptoms. After the second she did well for five days, and then had quick pulse, some rise of temperature, flushing followed by perspiration in the evening, chilly sensations (but no rigor), and anxiety about her safety, despondency, etc. These symptoms corresponded with diminution of the lochia and their occasional cessation; when the discharge became free the patient was better. April 7th there was some swelling of the left leg, below the knee, which increased, and the limb became œdematous. The swelling did not diminish until April 21st, and the limb is still larger than the corresponding one, and the joints are stiff, but there has been no pain, and the pulse and temperature have gradually fallen to the normal condition. There has been no loss of appetite or sleep, but the patient is still unable to leave her bed on account of the stiffness of the knee and ankle. There was no pain or tenderness in the region of the uterus.

The room in which this patient lies is large and airy, and there is a fire constantly burning in the fire-place, but it communicates by a door with a dressing-room in which there is a "set basin," and which opens into a bath-room with a water closet. The bed was close to the door of the dressing-room, but soon after the first symptoms appeared it was moved to another part of the room, opposite the fire-place.

Although both these patients had been previously confined without accident in the same rooms respectively as on the second occasions, Dr. Minot could not help suspecting that a minute quantity of sewer gas might have found its way into the apartments, sufficient to give rise to slight septicæmic symptoms, although the dose was fortunately not large enough to cause more dangerous accidents. He desired to call attention to the importance of looking to the sanitary conditions of the room in which a woman is about to be confined. No "set basin," or other communication with the soil pipe, should be considered safe in the lying-in room, or in another room opening into it; and there should always be an open fire-place, with a good draught, in which a fire could be lighted, or a lamp be kept burning, to insure free ventilation of the premises. He thought the patients in the cases reported may have owed their preservation from more serious results to the fact that the means of establishing a free current of air were provided.

Dr. Abbot said he knew of a case of effusion into the cavities of both knee-joints, the trouble coming on during two winters, and disappearing in following summers. In the third autumn a peculiar odor was noticed in the bedroom of the patient, which was found to proceed from an untrapped set basin. The basin was taken out, and the knee trouble, which had already begun to show itself, disappeared and has never returned.

◆

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

May 1st. **Dr. H. W. Williams** presided.

Dr. Bradford reported three cases of

A PAINFUL AFFECTION OF THE WRIST-JOINT.

One case was chronic in character, and lasted nearly a year before complete recovery took place. The symptoms were slight swelling and tenderness over the carpus, with the complaint of severe pain in the middle of the wrist, and but little interference with mobility at the radio-carpal articulation. The patients all improved under a treatment by fixation. All eventually recovered completely. The symptoms appeared without known cause, and no other except the wrist-joint was affected.

Dr. Bradford stated that Gosselin described an affection of the medio-tarsal articulation combined with a healthy condition of tibio-astragalar joint, and he felt inclined to consider these cases of wrist affection as analogous.

Dr. Ingalls said that many similar cases come under the observation of surgeons in hospitals like the City Hospital, which treat especially the laboring classes and those liable to abuse each other and themselves. When the first symptoms of the affection appear patients of this sort do not think it needs medical attention or rest, for there are no outward manifestations. They persist in their work, which often requires the use of the whole hand, as, for example, in wringing clothes and other hand work, thereby bringing a heavy, continued strain on the wrist-joint. At last they are compelled by the severity of the pain to seek advice. Superficial inspection, as a rule, yields no sign, but on careful manipulation there is found a puffiness on the posterior aspect of the wrist, and a delicacy of skin and softness of the subjacent tissues, which are entirely dissimilar to a hard cellulitis. Such cases, in spite of rest and dressing and the most careful treatment, often go on to an active, severe, and deep-seated inflammation, which makes surgical interference imperative. Several cases under my charge have needed operation to relieve the diseased bone beneath the synovial membrane. The question of temperament has an important bearing on the causation of such affections. They are not so likely to be found in the strong, broad hand with thick fingers, but rather in the long, slim, delicate hand, in a frame of finer fibre. A similar affection is often found in the tarsus of a heavy person whose vocation compels him to be constantly on his feet. Nothing will relieve it but fixation and rest, and attention to the general health.

Dr. J. J. Putnam asked if it was common in case of injury to wrist or hand to find muscular spasm continuing for some time after. He has now under treatment a case in which the injury and spasm seem to stand in the relation of cause and effect. The patient is a girl who was formerly subject to epilepsy, though she has had no attack for several years. One week ago she bruised her hand in a drawer. When examined there was no trace of the injury except a little heat, but the muscles of the hand and fore-arm and upper arm have been since in a state of tonic spasm. The little finger is drawn towards the middle finger to an extent which is impossible for a person in health. The biceps and triceps are also slightly involved, and possibly the muscles of the shoulder.

Dr. Bradford had seen no case so marked. During the winter one case of spasmodic action of the muscles of the wrist had come under his observation, the muscles of the fingers not being involved. The subsequent history of the case, so far as he had been able to follow it, had been steady improvement; in this case there was no trace of hysterical element.

In the cases reported to-night there was no difficulty in moving the wrist, the radio-carpal articulation not being affected. The carpus are generally at rest with reference to each other, and the motion between the carpus and the metacarpus is slight, hence the mobility of the hand and wrist was very little affected. The muscular atrophy which took place he considered due, not to spasm, but rather to want of tone in the muscles.

Dr. Putnam reported three cases, illustrated by microscopic specimens, for the purpose of calling attention to Professor Leyden's views on

THE RELATION BETWEEN POLIOMYELITIS AND DISSEMINATED NEURITIS.

The latter disease occurs, in Leyden's opinion, much oftener than it is diagnosticated, and complicates, if it does not cause, the inflammation of the cord itself in many cases of so-called poliomyelitis.

The first case had occurred two years ago, at the Massachusetts General Hospital under the care of Dr. Abbot, who had kindly allowed Dr. Putnam to examine the specimens. It had been characterized clinically by great pain, anæsthesia and paræsthesia, referred to the four extremities, muscular wasting, and great diminution or loss of electrical irritability, finally delirium and stupor. After death spots of softening were found in the optic thalami, but the cord and membranes were nearly healthy, certainly showed no marked disease. The peripheral nerves had not been examined, but it was plain that they had been diseased, and probable that this disease was primary.

The second case had occurred under the care of Dr. B. S. Shaw, to whom the reader was also indebted. The symptoms had been those of poliomyelitis, except that localized and continued pain had been so prominent that the diagnosis of meningitis had been entertained.

After death no trace of meningitis had been found, but an inflammation of the gray matter of the anterior cornua of the cord running throughout its entire length. The nerves had not been examined.

The third case had just occurred under the service of Dr. Minot, by whose permission it was reported. Here, as in the first case, acute symptoms referable to the peripheral nerves of all four extremities had been the predominating feature. The pain had been even greater, though the loss of electrical reaction and the paralysis not so great. There had been no great headache and no rigidity or opisthotonos until within the last days of the patient's life, unless, possibly, to some extent at the outset, in connection with the prolonged vomiting with which the attack had been ushered in.

After death well-marked and extensive meningitis had been found, also pronounced disease of the nerve roots and peripheral nerves (median, ulnar, popliteal), while the spinal cord appeared to be healthy. The reader thought it not improbable that the first lesion had been that of the peripheral nerves, while the meningitis might have been secondary, or at any rate simultaneous.

Dr. Webber said: The first case seems not proved to be a case of general neuritis. There were found many lesions of the brain where softening has begun, but the causation of other symptoms was not clearly made out.

The second case appears to be a good case of poliomyelitis, but primary neuritis is not proven because the peripheral nerves were not examined.

The third case seems more properly to be a case of cerebro-spinal meningitis. The symptoms are such as are quite characteristic of it, namely, fever, hyperæsthesia, diminution of motor power, opisthotonos and pain. In cerebro-spinal meningitis the functions of the nerves are often affected, also the nerves themselves, and after recovery atrophy of the muscles may occur and loss of electric reaction, which may be complete and persistent. In this case there is only a partial loss of electric reaction, and there is also hyperæsthesia, such as frequently exists in cases of cerebro-spinal meningitis.

The report is hardly clear enough to establish a general neuritis. Although the nerves were partially affected, the reaction, somewhat weakened to be sure, continued.

Dr. Putnam said: In the first case the spots of cerebral softening existed, but no connection could be traced between them and the loss of electric reaction. The cord was indeed somewhat decomposed, when hardening was undertaken, but, so far as the examination could be carried, it was essentially healthy, and since the peripheral symptoms, namely severe pain, wasting of muscles, and loss of electric reaction, were so marked, the peripheral nerves were certainly affected, and the central lesions were not the cause of the manifestations.

The second case was no doubt poliomyelitis. It had been brought forward in this connection, because the symptom pain, due probably to an affection of the peripheral nerves, had been so prominent throughout the history of the case. Since it is possible, as Leyden has suggested, that this neuritis may accompany or precede the myelitis.

As regards the third case, the question of cerebro-spinal meningitis or neuritis was considered. A positive diagnosis was difficult. But the absence of frontal headache, the rapid pulse, the absence of delirium, the unperturbed mental condition all opposed the idea of cerebro-spinal meningitis, and it was therefore set down as doubtful. If the retraction of the head at the outset was due to meningitis, why did it not continue and become greater. Vomiting is not a rare symptom in poliomyelitis as shown by Seguin's cases. He records forty-five cases in all, from many observers and covering many years, and in three of these vomiting is distinctly mentioned, and it is not improbable that it may have occurred in others without having been recorded. The case is not proved as one of disease of the peripheral nerves, but it makes a fair showing.

Dr. Webber. My objection is this, disseminated neuritis is a new named disease whose existence *sui generis* is still a matter of doubt. These cases are not sufficiently made out to prove a new disease. The affection of the intellect depends on the locality of the meningitis. I have seen cases of undoubted meningitis where with the naked eye could be seen no pus, and but slight congestion, where there was simply excess of serum. Opisthotonos is a variable symptom, sometimes not present. It depends on the amount of the disease and its locality. If the cord is chiefly affected, the cerebral symptoms might be slight. And the last case seems rather one of meningitis than of disseminated neuritis. I do not think the existence of this disease is yet established at all.

Dr. Putnam. Have you seen a case where the pain and tenderness were so great?

Dr. Webber. Sometimes in cerebro-spinal meningitis and in meningitis the pain is severe, and also appears quite early in the disease. The affection of the nerves was not extreme, for motion continued pretty fair. I have seen extreme and hopeless atrophy resulting from cerebro-spinal meningitis. But in this case life was not long enough to determine.

Dr. Putnam in conclusion admitted the justice of Dr. Webber's criticisms and agreed that these cases could not be used to prove the existence of primary disseminated neuritis. If, however, we may consider on Leyden's authority that such a disease is pretty well made out, he thought the early and striking prominence of the symptoms referable to the peripheral nerves in these cases might justify their use as possible illustrations of the diagnosis.

◆

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday Evening, October 9, 1882. The President, Dr. James Tyson, in the chair.

MYXOMATOUS TUMOR OF THE POSTERIOR CERVICAL REGION.

Presented by Dr. Nancrede for Dr. W. G. MacConnell.

The tumor was removed by Dr. J. H. Brinton, at the Jefferson College Hospital Clinic, some ten days since. The patient was a little boy aged four years, whose parents had first noticed the growth about two years ago. Latterly it has grown with considerable rapidity. It was of firm consistence, lobulated, and movable beneath the skin. giving the impression that it was a fibrous tumor. After removal, in addition to the above-mentioned characteristics, it was found surrounded by a capsule, and on section looked somewhat suggestive of myxoma; still it was thought by some to be merely a fatty tumor containing more fibrous tissue than usual.

Microscopic examination by Dr. MacConnell. Upon examining a frozen section, stained with iodine, meshes of capillaries are displayed, in the walls of which the endothelial cells composing the vessels can be distinctly seen. The aforesaid meshes contain the mucoid structure traversed by large pale fusiform cells, the processes of which anastomose with each other. In addition many leucocytes are seen, and, interspersing the growth in every direction, numerous yellow elastic fibres are readily distinguished.

When presenting the specimen Dr. Nancrede commented on the rarity of such growths.

DR. S. W. GROSS said he had himself presented several gelatinous polypi of the nose a number of years ago, which were most characteristic examples of myxomatous tissue. He could also recall a specimen of subcutaneous myxoma of the fore-arm, as well as the hæmatoid myxoma of the breast referred to by Dr. Nancrede. He was disposed to consider it the rarest of all neoplasms of the breast; indeed, he had never personally met with one, and, when preparing his work on tumors of the breast, he had written to numerous surgeons throughout the country, who all replied that they had never met with one affecting the breast.

DR. FORMAD remarked that he had exhibited a myxomatous fibroma of the labium some years since, and said that the peculiar milky appearance assumed by the fluid when such growths were thrown into alcohol was a good diagnostic point.

DR. SHAKESPEARE said that his personal experience as to the rarity coincided with that of Dr. Gross. This specimen is one of the rarest forms, as most of the fibrillæ consist of yellow elastic tissue. The rarity of myxomatous tumors seems to him to have much bearing on the views of Cohnheim and others as to the ætiology of tumors. The observers insist that all tumors spring from the remains of fœtal tissues not made use of in tissue construction, which remain dormant in their embryonal condition until subjected to some irritation, when they develop into the various neoplasms. Now tissue practically identical with that found in myxomata pervades the fœtus. How, then, is it that portions of this do not remain to give rise to myxomata? On the contrary myxomata are among the rarest of the neoplasms.

SPECIMENS FROM A MAN WHO DIED WITH BRAIN, LUNG, HEART, LIVER, SPLEEN, KIDNEY, AND BLADDER LESIONS.

Presented by **DR. J. T. ESKRIDGE.**

The specimens showing the above lesions were removed from the body of a man aged sixty-eight years. The patient had become deaf in the right ear thirty years before, while suffering from some brain disturbance. Attacks of jaundice, with gradually increasing permanent discoloration of the skin, had extended over a period of ten years. Since the early part of the year 1877 he had complained of incontinence of urine, an oppressed feeling over the hepatic region, dropsy in the feet and face, and a gradual loss of flesh and strength. The two years preceding his death he had been unable to work, but was only confined to bed five days. During the latter period his symptoms were in the order in which they were developed, great prostration, scanty secretion of urine, blindness for twenty-four hours preceding repeated convulsions, loss of speech, and almost total inability to swallow, although consciousness was preserved until coma ushered in the death scene. His temperature (axillary) did not rise above 100.5° F. The surface head temperature nearly equaled that of the axilla. No paralysis of the muscles of the face or extremities preceded death. The liver during life did not appear to be enlarged or altered in its outline.

The post-mortem examination revealed — in the brain, engorgement of the veins, with some effusion, slight pia-mater inflammation in the neighborhood of the fissure of Rolando, apparent degenerative changes in the left island of Reil, and anterior portion of the left temporo-sphenoidal lobe; in the pleura and lungs, old and numerous pleuritic adhesions, lobular and vesicular emphysema of the lungs, congestion of both lower lobes, and a nodule (probably cancerous) of the left apex; in the heart, fatty degeneration, dilated right ventricle, and incompetent mitral valves from ossific change; in the liver, multiple cancer without an increase in size or a nodular condition of the organ; in the spleen, marked increase of fibrous tissue and atrophy of the gland to one half or less its normal size; in the kidneys and ureters, the last stages of pyonephrosis, the glandular tissue being nearly all destroyed, the pelves were as large as a good sized orange, and the ureters dilated so as to admit a man's thumb; in the bladder, great hypertrophy of the mucous membrane and decrease of the capacity of the viscus.

PRIMARY CARCINOMA OF PANCREAS AND LIVER.

Presented by **DR. E. T. BRUEN.**

The interesting features pertaining to this case are the age of the patient — twenty-four years — and the rapidity of the abnormal processes. These rendered the diagnosis of malignant disease doubtful, until the appearance of nodular tumors in the liver. The family history was free from hereditary disease. The commencement of the disease dated from September, 1881, — death occurred on the 15th January, 1882. At first the symptoms related solely to the digestive tract, such as dull and heavy sensation after eating, with acid eructations, and occasional vomiting. Subsequently sharp, cramp-like pains in the abdomen were a prominent symptom. After the lapse of a week there commenced general itching, and two weeks later the skin became yellow. This yellowness and itching never disappeared during the history of the case. At the autopsy the gall-duct was obstructed by the enlarged head of the pancreas, so that extreme dilatation of the gall-bladder had ensued. This was probably the cause of the jaundice and not the liver disease itself. The bowels were regular and the appetite good when first seen. The case presented evidences of partial obstruction of the gall-duct with digestive disorder, but without the symptoms characteristic of malignant disease of the stomach or bowels. By the middle of December, 1881, the liver dullness had extended from the fourth interspace to three inches below the ribs in the nipple line, and from the ensiform cartilage the line of dullness extended to within one inch of the umbilicus. The hepatic region was tender on pressure, especially over the epigastrium. The patient complained about this time of dull pain over the liver, with griping pain in the abdomen. The pulse was 76 per minute. He had lost four pounds since admission, and looked thin. About this time a small inequality was noticed on the surface of the liver, three inches above and a little to the inner side of the umbilicus. The spleen was enlarged. By January 7th the lobulation of the liver became distinct, and the enlarged gall-bladder, rendered irregular by gall-stones, presented a slowly-increasing, elastic, tender tumor, situated to the right of the epigastrium and umbilicus. By January 12th the pulse became rapid, — 130 per minute, — the patient rapidly failed, and death occurred January 15th.

Autopsy. The pancreas was enlarged to double its size, the growth chiefly occupying its head aud compressing the common bile-duct. Microscopic examination showed it to be scirrhous carcinoma. The liver was thickly studded with nodules of medullary carcinoma, explaining the ante-mortem lobulated feel of the organ. The gall-bladder was distended to twice its normal size, and contained a number of gall-stones.

Remarks. The duodenal end of the organ, as is usual, was the seat of the disease. In a paper on thirty-nine cases of primary carcinoma of the pancreas, in St. Bartholomew's Hospital Report for 1881, jaundice is stated to be always present, while in twenty-four cases of secondary carcinoma this sympton was noted in but seven cases. This is presumably from the secondary growth occurring in some other portion of the organ than its head. Murchison says that the characteristic symptoms of carcinoma of the pancreas are pain in the pancreatic region, sensible tumors, and persistent jaundice. To these Dr. Bruen would add, intestinal dyspepsia, which differs in some essential features from the dyspepsia of organic disease of the stomach.

DR. MUSSER remarked that he could vouch for the presence of a distinct tumor of the pancreas, as he was present at the autopsy. The case had been under his observation in the Dispensary one month prior to admission to the hospital. On account of the age, he was puzzled as to an exact diagnosis, although confident that the cause of the jaundice was obstruction. He noted, among other symptoms, the intense itching of the skin, a point of importance, Sims says, in the diagnosis of obstructive jaundice from that due to suppression. In five cases of tumor of the pancreas he had lately seen, all were accompanied by jaundice.

DR. BRUEN called attention to the uncertainty of borrelation as a symptom of malignant disease of the liver. He had presented to this Society only two weeks since a liver exemplifying this condition in a marked degree, where nothing beyond cirrhosis in the stage of enlargement existed. The occurrence of carcinoma of the liver at so early an age is unusual, although Dr Pepper had shown a specimen of the disease to this Society some years ago occurring in an infant.

DR. TYSON said that there were two points in this case of great interest to him: Firstly, jaundice in carcinoma of the pancreas, while it is a frequent symptom, it is by no means an invariable symptom. Seven years ago he presented to this Society the specimens from a case of primary pancreatic carcinoma, where no jaundice had been present, and six months ago he presented to the Society a specimen of enlargement of the head of the pancreas from a patient who also presented no symptoms of jaundice. Secondly, as to the diagnosis from cancer of the stomach, he had noted in his experience, as was mentioned in the history of Dr. Bruen's case, the absence of gastric symptoms. This negative symptom is of importance, since the tumor is often detected in precisely the same spot in both these diseases. The absence of gastric symptoms with intestinal indigestion, irrespective of fatty diarrhœa, he considered the most reliable diagnostic points between carcinoma of the pancreas and stomach.

SPINDLE-CELLED SARCOMA OF THE SMALL INTESTINE.

Presented by DR. W. A. EDWARDS.

On September 23, 1882, I was asked to assist Dr. W. F. Atlee in the removal of an abdominal tumor. The patient, aged forty-eight years, whose menstruation had ceased at thirty-one years, first noticed the swelling in April last; on the day of operation she measured thirty-eight inches around the abdomen. The usual incision was made and the tumor reached, when its surface was seen to be of a dark purple hue, with a net-work of large veins ramifying in every part of its serous covering. A trocar and canula was introduced, but nothing but blood followed the withdrawal of trocar. The sac was then torn open, and its contents, of a soft, brain-like consistence, was emptied out. The growth was now turned out of the abdominal cavity. There was no distinct pedicle, but an attachment to the intestine of about the size of a half dollar was seen. Dr. Atlee says, " When I emptied the sac of its soft contents, I examined carefully, with *extreme care*, the part fastened to the intestine, and my fingers passed into the intestinal tube." A silk cord was tied around the attached portion and the remainder of the growth removed. The omentum was attached to the growth for a space of two inches; this was ligated and cut away, and the abdominal wound was closed, etc.

Death occurred September 25th at four A. M.

This growth sprang primarily from the submucous tissue of the small intestine, and grew with great rapidity, as the patient was only aware of its presence last April, and by September she measured, as above stated, thirty-eight inches. Microscopical examination of preparations taken from several portions of the growth clearly show it to be a spindle-celled sarcoma, and a most typical one at that. The small intestine is an unusual site for this neoplasm. As far as I am able to ascertain, there is no recorded instance of its occurrence in this situation. My friend Dr. Formad, to whom I have shown the growth, concurs with me in this statement. On the day of operation I noted as well as I could the absence of all secondary deposits. The surrounding intestines and peritonæum were apparently normal, not even unduly hyperæmic. No post mortem was permitted.

CHRONIC PARENCHYMATOUS NEPHRITIS COMPLICATING PHTHISIS PULMONALIS.

Presented by DR. JAMES TYSON.

My object in showing these kidneys is to illustrate the morbid anatomy of the renal complications which so frequently attends the later stages of phthisis pulmonalis. It is very well understood that when œdema of the feet and legs present themselves in cases of consumption, the end is not far distant; but the renal complication which is at the bottom of such œdema is often overlooked. It is, of course, not impossible that there should be œdema in the last stages of phthisis from simple alteration in the composition of the blood, — a watery state of it, — but in the majority of instances it means that the kidneys have become involved. As to the form of disease affecting the kidneys, it is acknowledged that it may be either lardaceous disease or chronic parenchymatous nephritis, but I think the impression prevails — it was at least my own until recently — that the amyloid kidney is the most frequent complication. I believe, however, that the chronic parenchymatous nephritis is more common, and it becomes a matter of interest, if not of importance, to be able to diagnose between these two conditions. It is well known that the microscopic and clinical characters of the urine in these two forms of kidney disease are often identical, so that no assistance is afforded by a study of the urine. The history of the case, of course, leads to neither particular form, but suggests both. One criterion only can I recall to aid us, and that is the presence of enlarged liver. So commonly associated is the enlarged amyloid liver with amyloid kidney, that the absence of it almost necessarily precludes the presence of amyloid kidney. At least, I am sure we would err less frequently if we were to consider all cases of renal disease attending consumption, unattended by enlarged liver, to be parenchymatous nephritis rather than lardaceous disease. It is true we often have enlarged fatty liver in consumption, but the degree of enlargement never reaches that of the amyloid liver, and hereafter I shall be inclined to consider all cases of renal disease complicating consumption to be parenchymatous nephritis, unless they are associated with enlarged liver, when I shall conclude that they are instances of amyloid disease.

Dr. Bruen considered that the passage of large quantities of urine and the history of specific disease or of prolonged suppuration preceding the kidney trouble, would warrant a diagnosis of amyloid renal disease.

Dr. Musser would ask whether the heart was hypertrophied, and what was Dr. Tyson's experience regarding hypertrophy of that organ in cases of amyloid disease and of chronic tubal inflammation of the kidneys. If not too late he would like to call attention to the absence of cardiac hypertrophy with an infinite degree of obstruction in the renal circulation in the case Dr. Eskridge had presented. This is in direct opposition to the view held by some, that the hypertrophy of the heart is a sequence of the renal obstruction in chronic interstitial nephritis.

Dr. Tyson replied, that in this particular instance he did not see the heart, and could not tell whether it was hypertrophied or not. The same law holds good for amyloid kidney as for chronic nephritis; if the case last long enough, hypertrophy is sure to be found sooner or later.

ECCHYMOSES OF THE MUCOUS MEMBRANE OF THE STOMACH.

Presented by Dr. J. M. Barton.

The history of the case was that of chronic lung trouble. The stomach upon being opened presented an irregularly shaped extravasation of blood, about two thirds of an inch in diameter. The mucous membrane covering the effusion was healthy, as it was in the rest of its extent.

Dr. Tyson remarked that these effusions are not uncommon, but he had never seen them except in their pin-point form.

Dr. Roberts asked if there had been violent vomiting recently.

Dr. Barton replied that nothing of this sort had been observed for some months prior to death.

Recent Literature.

Medical Electricity: A Practical Treatise on the Applications of Electricity to Medicine and Surgery. By Roberts Bartholow. Second Edition, enlarged and improved. Philadelphia: Henry C. Lea's Son & Co. 1882. Pages xx.–291.

As the first edition has been recently noticed, the second appearing only about a year after, it is not necessary to add much to what was then said. The more important changes are additions to the consideration of the measurement of electricity and a description of the rheostat. The normal formulæ for the galvanic reaction of muscles is more fully explained and the German lettering is retained. This is much better than attempting to use letters which correspond with English spelling. A chapter is introduced on Magneto-Therapy, and that on Static Electricity is enlarged.

The book retains its practical character and small bulk.

Cerebral Hyperæmia: Does it Exist? A Consideration of some Views of Dr. William A. Hammond. By C. F. Buckley, B. A., M. D., formerly Superintendent of Haydock Lodge Asylum, England. New York: G. P. Putnam's Sons. 1882. Pages 129.

Apparently Dr. Buckley is now in California. He has done good service in calling the attention of the profession to the unsoundness of Dr. Hammond's views regarding cerebral hyperæmia. Wrong views, popularly expressed, upon a subject of general interest may do much harm, and probably many physicians have been asked by anxious, overworked patients if they have not cerebral hyperæmia, the thought that they have too much blood in their brain giving rise to vague fears of apoplexy, paralysis, or other serious terminations. Dr. Buckley very truthfully says: "The effect of the work is misleading, if not pernicious, not alone to the non-professional reader who may happen to consult its pages, but even to the professional reader who may be disposed to follow blindly in the glamor of a great name."

Not only is Dr. Hammond's little book on cerebral hyperæmia analyzed and its contradictions and inconsistencies pointed out, but his other works are laid under contribution to increase the effect and show that they do not uphold the work under consideration.

Dr. Buckley is much too intemperate in the way in which he has performed his task. Unfortunately, it is difficult to combat that which is believed to be entirely erroneous without showing somewhat of a partisan spirit, and Dr. Buckley has not avoided this danger. So unnecessarily partisan is he many times that his readers may be tempted to lay down his book with a feeling that he has a personal spite against Dr. Hammond.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 23, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE CONTAGIOUSNESS AND TRANSMISSIBILITY OF CONSUMPTION. THE INTERNATIONAL CONGRESS OF HYGIENE.

THE subject of discussion at one of the meetings of the International Congress of Hygiene at Geneva last September was the contagion of pulmonary phthisis [consumption] considered from the point of view of history and of public hygiene. The limited time allotted to the discussion of the subject rendered a debate commensurate with its importance impossible. Some interesting remarks were, however, evoked.

Dr. Corradi, of Pavia, opened the question by presenting a series of conclusions in the form of propositions. (1.) A belief in the contagiousness of consumption may be traced to a very early period, and has exhibited itself at various periods, not merely as a common opinion, but also as a scientific doctrine. (2.) This belief reached its height in the second half of the last century, probably because the malady was especially prevalent at that period, so much so that at several points government felt forced to interfere, and attempt to control its spread. (3.) In the first half of the present century, on the contrary, the doctrine of contagiousness lost ground, anatomico-pathological investigations superseding questions of ætiology. (4.) Of late years experimental pathology has again taken up the subject, and sought to give the doctrine of contagion the support of results gained by inoculation of tuberculous products, and this has been followed still more recently by an effort to prove that the virulent principle of the malady is represented by a microphyte — a bacillus. (5.) Clinical observation should solve the problem which experimentation places so plainly before us; pathology has many other questions to settle which the doctrine of the parasitic nature of tuberculosis raises, and to place that doctrine in accord with the facts of predisposition and heredity. (6.) If contagion and transmission are possible, they arise under conditions still to be determined. (7.) In the mean time hygiene should treat phthisis as a dangerous malady, that is, as one capable of communicating and transmitting itself under certain conditions. (8.) Especial attention should be given to the relations established by cohabitation, and all influences which, apart from any specific action, by enfeebling the organism predispose to phthisis should be controlled. (9.) Although not demonstrated that foods can communicate tuberculosis, it would, nevertheless, be prudent to abstain from the flesh and the milk of tuberculous animals. (10.) The utmost care should be exercised in regard to the animal or human lymph used in vaccination. (11.) The establishment of separate hospitals or at least of separate wards for phthisical patients is to be strongly recommended. (12.) Further researches must be awaited to determine the particular prophylactic measures to be adopted. (13.) A regard to such hygienic practices as secure the physical and moral well-being of the people will in any case prove one of the strongest barriers to the diffusion of this scourge of our civilization.

In the course of the discussion which ensued, members expressed themselves as more or less in accord with the abstract propositions of Dr. Corradi; the president of the Congress, the venerable Dr. Lombard, of Geneva, reminding them at its conclusion that however correct their abstract propositions for preventing the transmission of the disease, they must not forget in regard to marriage that love blindfolds the eyes, and the first thing to do to make their counsels efficacious would be to try to remove this bandage.

An increasingly mercenary age may spare them this effort, though substituting another passion no more amenable to the dictates of prudence.

Dr. Leudet, director of the Medical School at Rouen, contributed some facts gathered by personal observation in the course of a professional practice inherited from his father, which are interesting as confirming previously held opinions announced in the pages of this and other American Medical Journals. As bearing upon the contagiousness of tuberculosis, he has been able to study fifty-six families, all belonging to the better classes. From among these fifty-six families in fifteen the husband was tuberculous at the time of marriage, and the wife healthy then or for a longer or shorter time after; in forty-one, on the other hand, the wife was the only one affected. Among the fifteen first mentioned cases, in a third, or five cases, the wife became subsequently affected, but of these five women one had a rachitic derivation, and became tuberculous ten years after the husband's death; a second had lost a sister a few years before of consumption, and a third had lost a maternal aunt of the same disease.

Among the forty-one families where the wife was alone or first affected, only three husbands developed the disease, and of these one had previously lost a sister with tuberculosis.

In regard to the offspring of these tuberculous parents, Dr. Leudet states that four of the five wives who became tuberculous after marriage had children, and but one only lost children from tuberculosis. Of the ten women married to tuberculous husbands who did not contract the disease nine had children, and five lost one or more from tuberculosis, the wives and mothers themselves escaping during periods of ten, fifteen, and twenty years.

Dr. Leudet concludes from his experience that (1) after marriage the wife is more apt to contract tuberculosis from the husband than the husband from the wife. (2.) That a wife not herself affected by a tuberculous husband may give birth to children who die of phthisis without herself developing the malady. (3.) Marriage is apt to hasten a fatal termination of the disease. (4.) The development of tuberculosis among different members of the same family at short intervals, even without hereditary predisposition, is sufficiently common.

These observations, though numerically limited, seem to have been carefully followed up, and the conclusions coincide in general with those reached previously by others. It is evident, however, that experimental pathology and clinical observation have both enough work still to do in this field before definite results can be reached warranting positive statements as to what we know.

◆

THE USE OF TOBACCO.

THIS old-fashioned subject is again brought to our attention by a very sensible editorial article on the Physiological Effects of Tobacco in the London *Lancet* of November 4th. The tendency of the present day toward denials and abstinence in the discipline of self and the policy of domestic life is spoken of approvingly, and this praiseworthy tendency, the writer thinks, is especially noticeable in the British Isles.

Abstinence from tobacco is one of the forms of denial much advocated by the moral hedgers and ditchers, who desire to cure the small vices of mankind by capital punishment. The *Lancet* has, however, only preached against the *abuse* of tobacco in its pages. It rather approves of its use in *true* moderation.

In the use of tobacco the three points to be considered are, according to the *Lancet*, the local effect of the oily vapor from the burning leaves, the immediate effects, and the secondary effects. There can be no question that smoking produces an important local effect on the mucous membrane of the lips, mouth, tongue, fauces, larynx, etc. There is at first dryness, then hyperæmia of the membrane itself, next excitation of the nervous filaments distributed throughout the region, with direct irritation of the centres, and reflex stimulation of the glands. The effect on the latter is considerable, and saliva may be washed or flow into the stomach, affecting digestion. It is easy to see how local disturbances, such as epithelial growths, may be induced by smoking.

The immediate effects may be stimulating, sedative, or narcotic, according to the quantity of nicotine actually introduced into the system and the idiosyncrasies of the smoker. The secondary effects are not *cumulative*, but gradually affect the system. "A man may exhaust the strength of his nervous system, and lower its tone, or he may impair his digestion by habitual excess in smoking, but these results are in no way cumulative."

A young man should not smoke before his majority, and it would be well to wait until the age of twenty-six, or the extreme limit of development.

The dangers to be avoided are: irritation of the mucous membrane of the mouth and fauces, the loss of salivary secretion, and superexcitement of the nerves and nerve centres.

Cigars are better than pipes, and far better than cigarettes, but not more than two thirds of a cigar should be smoked, the last third containing the poisonous oil, which will be given off in the smoke. The smoke should be taken into the front of the mouth, and ejected as rapidly as possible.

The tobacco chewer is not referred to in this article of the *Lancet;* he is, we fear, indigenous to our own country, a product of American *soil*. We have occasionally seen some old man who enjoyed a harmless quid and was the happier for it, and his neighbors none the worse, but the average American chewer, with hydra-mouth, who penetrates into every phase and aspect of public life, is a national disgrace. As great as this evil still is, however, we believe that it has already lessened, and will continue to grow less as social refinement becomes more wide-spread.

Our greatest danger now seems to be from the excess of cigarette smoking. The number of young men who smoke cigarettes is almost startling. It is not only students, but even school-boys in their teens, who vigorously and openly indulge in this dangerous habit.

We very well remember that we ourselves experimented on a "short six" at the age of sixteen, but this was done in the greatest seclusion, in the depths of the back pasture, and several hours were allowed for fumigation before calling on our friends and family.

At that time we should not have dared to smoke in public before the age of twenty-one.

The times have changed now, and boys begin to smoke when young, and the introduction of cigarettes seems partly accountable for this change. A little cigarette, filled with mild tobacco which lasts for only a few minutes, appears harmless enough. But the very ease with which these bits of paper can be lighted and smoked adds considerably to the tendency to indulge to excess. Then, too, young men and boys with vigorous and partly developed bodies do not feel the bad effects of tobacco, which nevertheless will eventually tell on the vitality of the nervous system, and feeling no immediate bad effects smoke on *ad infinitum*.

One of the pernicious fashions connected with cigarette smoking is "inhaling." The ideal cigarette smoker is never so happy as when he inhales the smoke, holds it in his air-passages for some time, and then blows it out in a volume through nose and mouth. If he realized the force of the statement of the *Lancet* that "the smoker who draws the greatest amount of smoke and keeps it longest in contact with the lining membrane of the air-passages undoubtedly takes the largest dose of the oil," he might at least endeavor to modify his smoking in this respect.

The dangers, then, which are incident to cigarette smoking are, first, the early age at which it is taken up; second, the liability to excess; and, third, the bad custom of inhaling the smoke. These are dangers superadded to those attendant on the ordinary use of tobacco, and should be carefully considered by all medical men.

THE USE OF TOBACCO BY CHILDREN.

Considerable attention is being paid both in the medical and lay press to the subject of tobacco-using among young lads. A well-known female correspondent has made the statement that seventy-five per cent. of school-boys over twelve or thirteen years old smoke cigarettes, probably without the knowledge of their parents, but not unknown to their teachers. She says further that the principal of one of the largest private schools in the country assured her of its pronounced evil effects upon his boys, but that he was so convinced of the firm hold the habit had gained upon them that he considered it as time thrown away to remonstrate or interfere with it.

The principal of a grammar school in a neighboring city found on investigation that of the boys under his charge, in age from eight to fifteen, four fifths confessed to using tobacco in some form. The deleterious effects of the drug in arresting the development of children are sufficiently known, but perhaps their importance is hardly realized. A correspondent of the *British Medical Journal* describes a case in which arrest of growth in the organs of generation seemed to be due to this cause. He was twenty-five years of age, and five feet nine inches and a half in height. His penis was small and the prepuce rather long, but not in a condition of phimosis. The testicles were remarkably small, neither being larger than a French bean, or, perhaps, what more nearly expresses their size and shape, no larger than the testes of a rabbit. The scrotum was not relaxed, nor was there any varicocele. There was short dark hair on the pubes.

The voice was somewhat high pitched, yet not like that of a woman or eunuch. Though twenty-five, he had not a trace of beard, whisker, or mustache; nor was there any hair on the chest or around the nipples. The breasts were flat, yet the contour of the lower extremities and lower part of the trunk resembled that of a woman more than that of a man. In observing this man one could but be struck with the evidence of development on a manly type up to a certain period, and then of a cessation of further virility.

His manly height and muscular development ill accorded with the entire absence of beard and weakness of expression. In these respects he differed from the short, rounded, plump eunuchs produced by robbing children early of their testicles.

In searching for a cause of this arrest of development, we ascertained that he had not suffered from mumps, nor from any inflammation of the testes. There appeared, indeed, to have been no disease which could have checked the growth of these organs. He, however, stated that he was an inveterate tobacco-chewer, preferring a good "quid" to victuals; and that he had commenced this habit at the early age of nine, by stealing from his father's pouch what he could not afford to buy. His mouth, at the time of examination, was occupied by a "plug," and there was further evidence of the habit in the staining of the teeth where the dentine was exposed. In the absence of any other cause to which this condition of generative organs could be referred, the writer was inclined to attribute their arrest of development to the poisonous effects of excessive chewing of tobacco.

ANOTHER MALPRACTICE SUIT.

We learn with pleasure that the second trial of the case against Dr. David Clark, of Springfield, has ended with a verdict for the defendant. The first trial resulted in a disagreement of the jury.

The case was a suit for damages for impaired ability in the use of the plaintiff's arm, broken on July 4, 1881, with the usual allegations of malpractice and unskillful treatment. The defense maintained that, aside from an imperfect rotation, the arm is as good as ever, and that this imperfection is due to the plaintiff's own carelessness. Judge Pitman, in his charge to the jury, is said to have set forth very clearly and impartially the bearings of the case. He instructed them that the burden of proof rested with the plaintiff, and that if the evidence furnished reasonable ground to believe that the imperfect condition of the arm was due to any action of the plantiff, they should find for the defendant. Also that if they found that the defendant possessed the average skill of his profession, which was all he claimed for himself, and that in this instance he exercised this skill, they should find for him. The *Springfield Republican* believes that this decision of the case will probably nip in the bud some similar suits against local doctors.

MEDICAL NOTES.

— In our issue for November 2d we referred to the brain of a Leadville gambler, which weighed sixty-two and a quarter ounces. Following the authority of one of our exchanges, we spoke of it as the heaviest brain that had been weighed in this country. Our attention has since been called by Dr. D. S. Lamb, of the Army Medical Museum, to a brain in that collection of the remarkable weight of seventy-three and one half ounces avoirdupois. It was taken from a Chippewa Indian squaw, hydrocephalic and a dwarf, whose skull has a capacity (measured by No. 8 shot) of 2760 cc.

NEW YORK.

— At the last meeting of the Medico-Legal Society, held November 15th, a paper was read by Dr. J. Clarke Thomas on Death by Drowning Medico-Legally Considered. In the course of it he reviewed the testimony in the Malley trial in New Haven, and arrived at the conclusion that Jennie Cramer committed suicide. The paper was discussed by Dr. Finnell, Dr. Spitzka, and others.

— The New York Society for the Relief of the Ruptured and Crippled held its nineteenth annual meeting at the hospital of the Society November 16th. The report of Dr. James Knight, surgeon-in-chief, showed a large increase of patients over the preceding year. There were treated in the out-door department 1300 patients, of whom 299 became in-patients. This was an average increase of more than fifteen per cent. over the number of the previous year. Of the operations performed in the hospital during the year, 97 were for the relief of club-foot. The city and county of New York pay about two thirds of the expense of the in-door department.

— A reception was given to Mr. Seymour Haden, the distinguished English etcher and surgeon, by the Lotos Club on Saturday night, November 11th, which was attended by a large number of the medical profession of New York. The remarkable feature of Mr. Haden's career is that it is only his leisure hours that he has devoted to the pursuit of art, and yet, while maintaining a high position as a surgeon, he has become known the world over as the finest etcher of modern times. A large part of the proceeds of his etchings he has devoted to charitable purposes, and almost the entire amount realized from his perhaps most celebrated work, The Breaking Up of the Agamemnon (which alone brought him in many thousand pounds), he gave to the hospital for incurables, which he founded. In the course of his remarks on this occasion he alluded to Mr. Herbert Spencer's recent address at the dinner at Delmonico's as follows: "Strange to say, that very reputation for energy which has been found fault with by Herbert Spencer has been a great attraction to me in the visit which I am now paying you. I only wish that we had a great deal more of it on our side of the Atlantic. I disagree *in toto* with Mr. Herbert Spencer. It has been my business and my pleasure to see the effect of work, and to judge of it, and I can honestly say that I never saw, in all my professional career, the least injury to life or health result from what Mr. Spencer calls overwork. Only the other day — just before I left England — I was met in consultation by one of the most eminent physicians in London, Sir William Gull. The case before us was that of a man who was said to be suffering from overwork. I asked Sir William Gull if he had ever met with a case of mischief or injury arising from this cause, and he said he had not. So for once at least the doctors agreed." In the parlors of the Lotos Club there was a magnificent collection of Mr. Haden's etchings, and it was certainly a rare treat to see the distinguished master present in the midst of his works.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 11, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	563	218	19.53	10.05	3.80	2.31	5.68
Philadelphia	846,984	323	97	19.16	3.71	—	4.33	13.59
Brooklyn	566,689	255	107	21.17	16.07	5.10	.78	7.45
Chicago	503,304	187	84	26.70	11.21	2.67	3.74	10.15
Boston	362,535	164	48	18.18	13.33	5.45	2.42	8.48
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	200	75	36.50	4.50	4.50	.50	18.00
Cincinnati	255,708	119	48	17.95	18.70	.86	.86	3.40
New Orleans	216,140	119	35	22.23	.86	9.46	—	1.72
District of Columbia	177,638	87	—	26.18	9.52	5.95	2.38	10.71
Pittsburg	156,381	71	28	32.38	11.26	5.36	7.04	14.08
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	46	20	44.72	4.34	—	2.17	19.53
Providence	104,857	47	13	29.82	6.39	4.26	21.30	2.13
New Haven	62,882	20	9	25.00	15.00	5.00	20.00	—
Charleston	49,999	35	12	5.72	2.86	—	2.86	—
Nashville	43,461	18	4	22.22	11.11	11.11	—	5.55
Lowell	59,485	20	6	30.00	5.00	10.00	10.00	5.00
Worcester	58,295	17	6	23.55	11.76	5.88	5.88	5.88
Cambridge	52,740	22	8	27.27	4.54	13.64	—	13.64
Fall River	49,006	16	7	31.25	31.25	12.50	6.25	6.25
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	9	0	11.11	—	—	11.11	—
Springfield	33,340	10	0	10.00	—	—	—	—
Salem	27,598	8	2	—	—	—	—	—
New Bedford	26,875	11	2	9.09	—	—	—	—
Somerville	24,985	9	0	22.22	11.11	—	—	22.22
Holyoke	21,851	11	7	63.63	18.18	—	18.18	45.45
Chelsea	21,785	8	2	25.00	12.50	—	—	25.00
Taunton	21,213	6	0	16.66	16.66	16.66	—	—
Gloucester	19,329	6	2	33.33	—	—	—	16.66
Haverhill	18,475	6	—	—	16.66	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	2	1	—	—	—	—	—
Newburyport	13,537	8	4	12.50	25.00	—	—	—
Fitchburg	12,405	2	0	50.00	—	—	50.00	—
Malden	12,017	4	1	25.00	25.00	—	25.00	—
Fifteen Massachusetts towns	117,603	40	6	12.50	2.50	2.50	2.50	2.50

Deaths reported 2469 (no reports from St. Louis and Buffalo): under five years of age 850: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 558, consumption 361, lung diseases 224, diphtheria and croup 217, diarrhœal diseases 100, typhoid fever 75, scarlet fever 56, malarial fevers 31, small-pox 28, whooping-cough 17, cerebro-spinal meningitis 11, measles 10, puerperal fever seven, erysipelas six. From *scarlet fever*, Cincinnati 14, Brooklyn 13, Chicago 11, New York six, Baltimore and District of Columbia three each, Milwaukee two, Philadelphia, Boston, Worcester, and North Adams one each. From *malarial fevers*, New Orleans 12, New York nine, Brooklyn five, Baltimore and District of Columbia two each, Springfield one. From *small-pox*, Baltimore 16, Chicago six, Philadelphia three, Pittsburg two, New Orleans one. From *whooping-cough*, New York 11, Brooklyn and Chicago two each, District of Columbia and Lowell one each. From *cerebro-spinal meningitis*, New York four, Milwaukee two, Pittsburg, Fall River, New Bedford, Gloucester, and Northampton one each. From *measles*, New York six, Baltimore four. From *puerperal fever*, Boston and Milwaukee two each, New York, Pittsburg, and Providence one each. From *erysipelas*, Baltimore two, New York, Cincinnati, Nashville, and Newburyport one each.

One hundred and twelve cases of small-pox were reported in Baltimore, Pittsburg five; typhoid fever 38, diphtheria 34, scarlet fever 16, in Boston; scarlet fever 17 and diphtheria 12, in Milwaukee.

In 33 cities and towns of Massachusetts, with a population of 993,641 (population of the State 1,783,086), the total death-rate for the week was 19.42 against 20.00 and 19.11, for the previous two weeks.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending October 28th, the death-rate was 21.4. Deaths reported 3477: acute diseases of the respiratory organs (London) 355, scarlet fever 120, fever 103, diarrhœa 95, measles 91, whooping-cough 54, diphtheria 17, small-pox (London three) 5. The death-rates ranged from 16.9 in Bristol to 34.2 in Preston; Leicester 17.4; Brighton 18.6; London 19.6; Birmingham 20.6; Nottingham 22.1; Manchester 23.8; Plymouth 24.5; Liverpool 25.4; Leeds 26.4; Birkenhead 28.3. In Edinburgh 17.7; Glasgow 25.7; Dublin 22.5.

For the week ending October 28th, in the Swiss towns, there were 20 deaths from consumption, lung diseases 14, diarrhœal diseases 14, diphtheria and croup eight, typhoid fever six, scarlet fever one. The death-rates were, at Geneva 13.4; Zurich 6.1; Basle 13; Berne 10.3.

The meteorological record for the week ending November 11th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
November, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 5	30.439	33	37	30	68	62	68	66	N	NE	N	14	15	11	O	O	C	—	—
Mon., 6	30.364	38	44	29	57	62	68	62	N	NE	E	17	16	12	O	O	O	—	—
Tues., 7	30.348	38	44	36	89	83	100	91	NW	N	N	11	8	8	R	O	R	—	—
Wed., 8	30.231	40	46	36	89	78	100	89	NW	NW	NW	6	13	4	O	O	C	—	—
Thurs., 9	30.144	43	59	33	79	59	84	74	W	SE	SW	5	5	3	F	F	C	—	—
Fri., 10	30.188	52	58	41	77	75	72	75	SW	SW	SE	6	3	2	O	O	O	—	—
Sat., 11	30.226	47	54	43	96	98	94	96	SE	SE	SW	1	6	10	G	G	O	—	—
Means, the week.	30.277	41	49	35				79										—	—

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 10, 1882, TO NOVEMBER 17, 1882.

Moore, John, surgeon. The leave of absence granted by S. O. 145, C. S., Department of the Columbia, extended one month. S. O. 175, paragraph 2, Military Division of the Pacific, November 3, 1882.

Williams, John W., major and surgeon. Assigned to duty at Fort Cœur d'Alene, Idaho. S. O. 161, paragraph 3, Department of the Columbia, October 26, 1882.

Ainsworth, F. C., assistant surgeon. The leave of absence granted November 1, 1882, is extended one month. S. O. 121, Military Division of the Missouri, November 9, 1882.

Gardner, Edwin F., captain and assistant surgeon. Ordered to Fort Walla Walla for duty. S. O. 161, paragraph 3, Department of the Columbia, October 26, 1882.

Reed, Walter, captain and assistant surgeon. Relieved from duty in the Department of the East and assigned to duty in the Department of the Platte. S. O. 266, paragraph 4, A. G. O., November 14, 1882.

Owen, William O., Jr., first lieutenant and assistant surgeon. To proceed to Astoria, Oregon, and report to First Lieutenant E. B. Rheem, 21st Infantry, for duty with his command. S. O. 164, paragraph 5, Department of the Columbia, October 30, 1882.

Wyeth, M. C., first lieutenant and assistant surgeon. To report to Fort Snelling, Minn., for temporary duty. S. O. 185, paragraph 3, Department of Dakota, November 9, 1882.

Degrees Conferred. — At the graduating exercises of the Medical Department of Dartmouth College, on November 14th, the following gentlemen received the degree of M. D.: —

Newell Wesley Bean, New Hampshire; Hermon Cooper, New Hampshire; Ruggles Allerton Cushman, Massachusetts; Charles Byron Drake, New Hampshire; Oliver Davis Eastman, Vermont; John Argillo Gregg, Massachusetts; Herbert Ernest Jones, Maine; Enice Floyd Lamb, New York; Joseph Eugene LaRocque, Canada; Charles Colby Larrabee, Maine; Reginald Barkley Leach, Indiana; Henry Russell Lowe, Massachusetts; Albion Sullivan Marden, Vermont; Hilary John Moore, Liberia, Africa; Eugene Norton Mullins, New Hampshire; John Nottage, New Hampshire; George Atwood Pettigrew, Vermont; John Benson Raynes, New Hampshire; Marvin Fisher Smith, New Hampshire; Caleb Soper, New York; Dellah M. Wells, Massachusetts.

Erratum. — In the report of the Proceedings of the Obstetrical Society, published in last week's journal, the misplacement of the word "*no*" in the last paragraph of Dr. Abbot's remarks, at the foot of the first column on page 469, gave an entirely false impression of what he said. The last three lines should read: "In previous labors, with one exception, artificial aid, either by turning or forceps, had been required; no bad symptoms followed."

Erratum. — On page 447, second column, of Journal, for Dr. Nathaniel Allen read Dr. Nathan Allen.

Lectures.

ON THE TREATMENT OF PNEUMONIA.[1]

BY PROFESSOR DUJARDIN-BEAUMETZ,

Physician to the Hôpital St. Antoine, Member of the Academy of Medicine, Paris, France.

LECTURE III.

GENTLEMEN, — In the preceding lectures I have set forth the principal methods of treatment of pneumonia. It now remains for me to tell you how and in what measure you should utilize these different therapeutic agents. In a word, I have to speak of indications and contra-indications of treatment.

TREATMENT OF ACUTE LOBAR PNEUMONIA.

I shall first indicate the management of acute lobar pneumonia without complications, then we will consider such complications as are likely to arise, and what ought to be done to meet these complications.

You have, we will suppose, a young patient of fairly robust constitution, who, under the influence of cold, has contracted pneumonia of one or more lobes. What shall be your mode of treatment? Three considerations should first engage your attention: (1.) When did the disease begin? (2.) What does physical examination reveal as to the state of the lung? (3.) What is the general condition of the patient?

The date of invasion of the malady, which is generally easy of determination, owing to the chill which accompanies it, is of importance, because, knowing this, you know that about the seventh or the ninth day, if everything goes on favorably, the disease may be expected to terminate in resolution. The local examination enables you to be cognizant of the extent of the pulmonary lesion and of complications. Lastly, the general condition of the patient tells you how his system supports the local phlegmasia. You proceed, then, thermometer in hand, waiting for the period of defervescence, and giving careful heed to the three points above set forth.

This is nothing but expectancy, you will say. I admit it, but it is a rational expectancy, and you shall see that, as circumstances indicate, you have something to do beside acting the part of a passive spectator. First of all, admitting that a favorable evolution is taking place, it is well to give certain ptisans and mixtures. Expectancy, pure and absolute, is not possible except at the hospital; it is impracticable in private practice. The patient and his family demand of the physician applications and remedies, and we should yield to this desire as long as it does not compromise the normal evolution of the malady.

You can, then, prescribe some simple emollient ptisan for the cough; infusions of senga, of pectoral flowers,[2] sweetened with syrup of tolu or wild cherry. You may add to these herb teas, to allay restlessness during the night, calmative potions, and among these the following will be found useful: aconite, bromide, the compound tincture of ipecac (or fluid Dover's powder), or any other medicament may be added to it as occasion may require.

℞ Aquæ laurocerasi,
Aquæ tiliæ Europ.,
Aquæ lactucarii,
Syrup. papaveris . . . . . āā ʒi. M.
Dose, one or two teaspoonfuls.[3]

In fine, for nourishment you may give milk, broths (not made too rich), and wine and water sweetened a little.

I am supposing that everything is going on for the best, that at the seventh day of the sickness defervescence takes place, and that the thermometer, which before marked 39° or 40° C. (102° to 104° F.), now indicates a sudden fall to 38° C. (100° F.). Your rôle is not yet terminated; indeed, it ought to be more active than it was in the first period of the disease.

At the moment of defervescence a very important phenomenon may be noted: while the general symptoms disappear the local symptoms persist. You hear a blowing sound and subcrepitant râles, and this often a fortnight after defervescence, owing to the fact that the intra-alveolar fibrinous deposit is very slow to undergo resorption. You ought, then, to try and hasten this absorption of inflammatory products, and you can attain this end by resorting to two sorts of medicaments, revulsives and expectorants.

VESICATORIES IN PNEUMONIA.

This question of the utility of revulsives in pneumonia has been much discussed. Some claim excellent results from them; others pretend that they are useless, and even injurious.[4]

Let us examine, then, this debated subject and first see what experimentation teaches.

Revulsion [or counter-irritation] practiced upon any part whatever of the cutaneous surface, modifies the vaso-motor circulation of points of the economy more or less remote from the place where this revulsion is made. You are all familiar with the experiment of Halmann, who, on irritating the skin of a frog's back with cantharidal collodion, observed upon the interdigital membrane, vaso-motor disturbances characterized by an acceleration of the circulation and by a very marked constriction of the capillary vessels, phenomena which soon give place to a slowing of the course of the blood, with dilatation of these same vessels. Cutaneous revulsion, then, modifies the capillary circulation in points more or less remote from the place of application of the revulsion.

Moreover, clinical observation gives an evident demonstration of the action of revulsion in pulmonary affections. When we see pneumonia develop in individuals affected with eczema of the legs the eczematous secretion ceases with the invasion of the phlegmasia, and does not return till the stage of resolution is well established. In fine, do we not observe, on the other hand, when the revulsion is too considerable, as in the case of a very extensive burn, even of the first degree, grave visceral disorders manifest themselves on the part of the intestines or lungs?

---

[1] Delivered in the Hôpital St. Antoine, and translated, by permission, from advanced sheets, by E. P. Hurd, M. D., Newburyport, Mass.

[2] [The pectoral flowers of the French Pharmacopœia consist of mullein, mallows, cat's-foot, and colt's-foot. — TRANS.]

[3] [Among the pectoral ptisans commonly prescribed in this country we may enumerate infusion of marsh mallows (althæa officinalis), of slippery elm, of colt's-foot (tussilago), with or without licorice. Instead of the formula above given, which it is not easy for our apothecaries to fill, the following may in some cases be used to advantage:

℞ Aquæ lauro cerasi,
Acid. hydrobromic dil.,
Syrup. papaveris,
Syrup. prun. Virgin., āā. Dose, ʒi. as required. — TRANS.]

[4] Rasori considers vesicatories useless in pneumonia; Laennec taught that they were harmful; Andral says that they are a torment to the patient rather than a relief; Rostan, that by blistering we add another disorder to the one already existing; Louis "never saw any good from blisters": Fonssagrives condemns them; Grisolle is hesitating. . . . Despite all the objections, the vesicatory continues to be a part of current practice in pneumonia, and Jules Besnier has shown, in his masterly thesis, the advantages of this medication in the treatment of pleurisy. Jour. de Thérap., 1876, page 376.

When you determine revulsion by cantharides you undoubtedly obtain some effect from the absorption of the active principle of the vesicant and its stimulant action on the general circulation and on innervation. Gendrin and Galippe have both treated of the vaso-motor excitation produced by cantharidine.[1]

I believe, then, that cutaneous revulsion, and in particular that made by cantharides, has a positive effect, through the vaso-motor nerves, on the circulation of the splanchnic organs; effect which we can utilize when we are desirous of promoting the resorption of inflammatory products. You know that in therapeutics the name *resolvent* or *discutient* is given to medicaments which hasten this absorption.

The ancient pharmacopœia divided the discutients into *solvents*, *deobstruents*, and *absorbents*; the first having for their object to soften (or melt down) the morbid products; the second to render more free the circulation in the capillaries and lymphatics; the third to promote the absorption of materials which have undergone modifications more or less profound. This old division is still exact in our day, and it gives quite a real explanation of the physiological phenomena which take place in inflammatory exudations. I insisted at considerable length on this point at the recent meeting of the International Medical Congress, held in London, where I had the honor of being appointed, in the Section of Therapeutics, to open the discussion on the question, "What remedies should be used to promote absorption of inflammatory and other morbid products?"[2]

If I were going to class the cantharidal vesicant in any one of the three groups above enumerated I should call it a deobstruent. If numerous discussions have arisen, and arise continually, as to the real value of blistering in pneumonia, it is because care has not been taken to fix the precise time in the evolution of the malady when this revulsion will do the most good. I do not think that blistering has any favorable effect in the active period of pneumonia. When, however, the acute symptoms have subsided and defervescence has arrived, there is, in my opinion, no more powerful means to hasten absorption of the exudation. I would recommend that you use large blisters, say fifteen centimetres square (about six inches by six). As soon as vesication is produced remove the blister and substitute a poultice; you will thus be likely to avoid the strangury which sometimes follows the fly-blister.

The vesicatory is not the only revulsive measure that has been advised. Aran has proposed Mayor's hammer, Power the essence of turpentine, and Weber mustard sinapisms and baths, but these means are exceptionally employed.[3]

EXPECTORANTS IN PNEUMONIA.

At the same time that you use blisters to hasten absorption of the exudation you give expectorants to facilitate the discharge, in sputa, of products that have undergone the granulo-fatty degeneration. I believe, for my part, that abuse has been made of expectorants. I see a good many of my *confrères* give kermes, or some other antimonial, from the very onset of pneumonia. I think that in the earlier periods kermes does little or no good, and would limit its use to the declining stages of the disease, when, for instance, the subcrepitant râle gives place to the souffle; this is the time to promote, by every means in our power, removal of the exudative products of the inflammation. In broncho-pneumonia, as you are aware, the case is different, and we give expectorants and emetics from the very first.

To sum up, then, in ordinary cases of acute lobar pneumonia in the adult, your treatment will consist of calmative potions, expectorant ptisans, wine and water, and liquid nourishment of a simple kind, and when defervescence takes place the application of revulsives and the use of expectorants. But quite often certain complications appear which require a more active intervention. Let us examine these in their order.

LOCAL SYMPTOMS THAT DEMAND TREATMENT.

The pain in the side may be severe, and may so aggravate the condition of the patient that you will be obliged to do something for its relief. Apply, then, wet cups; it is a heroic remedy, but do not forget that the farther removed your patient may be from the onset of the disease the less, as a rule, the pain will be felt.[4]

The dyspnœa is sometimes intense, and necessitates an active treatment. You will have, first of all, to search with care for the cause of this dyspnœa, which may have origins widely different. It may depend on the extent of the lesions, on the concomitant pulmonary congestion, on the intensity of the fever, and, lastly, on oppression of the pulmonary and cardiac plexus of nerves. Several authorities, and particularly Coomis, have attributed to functional troubles of nervous origin an important part in the evolution of pneumonia; they have maintained that the cardiac perturbations, and above all the dyspnœa, are due to the action of altered blood on the nervous centres.[5]

For this dyspnœa you have two powerful remedies at your command, blood-letting and hypodermic injections of morphia. When the pulmonary congestion is intense, the dyspnœa appalling, and asphyxia imminent, then blood-letting gives your patient a real amelioration, but do not forget that this amelioration is momentary, that the mass of blood, diminished by the venesection which you have just made, will quickly undergo replenishment, and before having recourse to this means weigh well the advantages and disadvantages. Often it is of importance to gain a few hours, and attain, without mortal danger, the expected moment of defervescence. In such cases blood-letting can render you great service, and it is for you to decide the opportune moment to intervene.

---

[1] Gendrin, Des larges Vésicatoires, Bull. de Th., 1852. Galippe, Dela Cantharadine, Thèse de Paris.

[2] Dujardin-Beaumetz, Extrait du Congrès international de Londrès, 1881. Bull. de Thèrap., September 1, 1831.

[3] Weber, On the Value of Mustard Baths in the Pneumonia of Children, Am. Jour. Obstet., vol. xi., 1878.

[Whether it be right or wrong, it is almost the universal practice of physicians in this country to apply mustard sinapisms in the early or formative stage of pneumonia, and to continue them, over the inflamed lung, as long as they can be borne by the patient. Ordinarily the family of the patient apply the mustard poultice before the physician arrives. Speaking from personal experience I should say that it never does harm, and I have seen it followed by relief to the pain and dyspnœa. — TRANS.]

[4] The pain in the side in pneumonia may be due to different causes: pleurisy, hepatic congestion, pericarditis. Andral believes that the pain is always the result of a concomitant pleurisy. Beau has shown that it is an intercostal neuritis that causes the pain.

To summarize: in the words of Peter, the pain in the side in pneumonia is a pleuritic pain, and is the expression of an intercostal neuropathy. This pain has its maximum of intensity the first day of the malady, and disappears generally the third or fourth day.

[5] The theory is that the blood is altered by a morbific agent, and the cardiac and respiratory disturbances are due to the toxic action of this altered blood on the spinal marrow, it may be, or on the ganglia of the cardio-pulmonary plexus. Vide Coomis, Des Causes de la Mort dans la Pneumonie, Union Médicale, September 8, 1881, p. 398. Coomis's theory is based on the experiments of Michael Foster, Wagner, Goltz, Heidenhain, Ludwig, DuBois-Reymond, and of Pflüger.

You all know the value of morphia as a respiratory and cardiac stimulant; this property you can utilize in this asphyxiating period of pneumonia. Do not hesitate to have recourse to this remedy, and inject boldly under the skin one centigramme of morphia (one sixth grain); it will sustain the vital forces of the patient, and enable him for some time to breathe more freely.

Another symptom, not quite so common as the intercostal pain and the dyspnœa, is delirium. It may depend on a variety of causes, the extent of the pneumonia, the susceptibility of the patient, whom the least febrile movement renders delirious, the very intensity of the fever, in fine, the intemperate habits of the patient. Leave at one side, for the present, this last complication, due to alcoholism, to which we shall return, and let us see what shall be the treatment of the delirium in ordinary cases.

Three medicaments may be employed: musk, bromide of potassium, and chloral. Musk has been especially vaunted by Trousseau; you may give it in pills or in potions in the dose of fifty centigrammes (seven or eight grains). I prefer the bromide and chloral, which give excellent results when administered together, calming considerably the delirium and agitation of the patient.

A good preparation is the following: —

℞ Potassii bromid. . . . . ʒij
Chloral hyd. . . . . gr. xlv.
Syrup . . . .
Aquæ . . . . āā ℥ij. M.
Sig. Give a tablespoonful in a glass of egg and milk.

Each tablespoonful contains fifteen grains of bromide and a little more than five grains of chloral.

Be not unduly alarmed at the delirium and its intensity, for it follows the thermometric curve of the malady, and generally disappears with the defervescence.

ADYNAMIC PNEUMONIA.

In other circumstances it is the *ensemble* of general phenomena which ought to guide the physician in determining what shall be the treatment. This is the case when the pneumonia is accompanied with a considerable depression of the vital forces, and takes on a strongly marked typhoid character. This is a form frequently seen in our hospitals, whose very frequency, at certain times, justifies the inquiry whether, in such cases, pneumonia ought not to be considered a contagious disease. However we may regard it, a tonic treatment is demanded, and here we behold the triumph of the alcoholic medication.

In what form shall you prescribe alcohol? In the hospital practice you often hear me order Todd's mixture.[1] There are numerous formulas of alcoholic mixtures; the potio alcoolique of the hospitals of Paris is as follows: —

℞ Cognac or rum . . . . gr. 60 (℥ij).
Potio diacode . . . . gr. 60 (℥ij). M.

The alcohol which we use is not of vinous origin; it is a distilled product of fermented grain, which, before being an article of commerce, is diluted with water, and designated "trois-six;" it marks 50° on the areometer of Gay-Lussac.

I am of opinion, gentlemen, that when you can do so, and your patients are in circumstances to afford it, you will find it an advantage to substitute good, generous wines for the Todd mixture and potions containing alcohol or whiskey. M. Audigé and myself, as you are aware, have experimentally shown the harmful effects of alcohols obtained by distillation, and especially those which come from grain, beets, and potatoes.

The least dangerous are the alcohols that are obtained from wine. But since the *phylloxera* has destroyed our vineyards in Charente, vinous *brandies* have become scarce, and if the word *cognac* continues to be inscribed on our flasks be persuaded that in the immense majority of cases the contents are an artificial mixture, in which vinous products are completely lacking. In such a case there is no alternative but to eschew cognac, and choose the mellow wines of Southern France and Spain, diluted with water, which your patient may take freely. The various grogs and good old West India rum may be conveniently employed, and aromatic wines with canella or calisaya often give good results.

Give, then, plenty of alcoholic stimulants, varied as occasion may prompt, and sweetened to render them less irritating: to mitigate the uncomfortable gastric heat and oppression produced by this regimen, give raw milk; and if this treatment does not suffice add the preparations of cinchona to your alcoholic potions.

BILIOUS PNEUMONIA.

In other circumstances there exists, concurrently with the pneumonia, a strongly marked saburral state. The tongue is white, there is anorexia, and often even a light sub-icteric tint. When this icteric condition is clearly pronounced, we have to do with what was called by Sydenham and others bilious pneumonia. There is more or less jaundice, great prostration, constipation, epigastric pains, nausea, and vomiting; headache and vertigo are frequent accompaniments. These pneumonias, with gastric or hepatic complications, are best treated by the emeto-cathartics. Ipecac and tartar emetic give excellent results. Give scruple doses of ipecac or grain doses of tartar emetic; these clear the *primæ viæ* of vitiated matters.[1]

---

[1] The following formulas for the potion of Todd are given: —

POTION OF TODD (DORVAULT).

℞ Old brandy . . . . . . 60 gram (℥ij).
Distilled water . . . . . 90 " (℥iij).
Simple syrup . . . . 40 gram (℥i and ʒijss).
Tincture of canella . . . . 10 gram (ʒijss). M.

GUBLER'S ALCOHOLIC MIXTURE.

℞ Alcohol at 85 degrees . . 50 gram (℥i and ʒv).
Water . . . . . . 50 " (℥i and ʒv).
Syrup aurantii corticis . . 50 " (℥i and ʒv). M.
Sig. A tablespoonful every two hours.

POTIO ALCOOLIQUE OF JACCOUD.

℞ Red wine. . . . . 100 gram (℥iij and ʒiiss).
Spts. of canella . . . . . . 8 gram (ʒij).
Watery extract cinchona . . . . 4 " (ʒi).
Cognac . . . . . 30 to 90 gr. (℥i to ℥iij).
Syrup aurantii corticis . . . . . 30 gr. (℥i). M.
Sig. Tablespoonful every two or three hours.

MISTURA VINI GALLICI, B. PH.

℞ Spts. vin gallioi . . . .
Aquæ cinnamoni . . . . āā ℥iv.
Vitel. ovi . . . . ij.
Sacchari . . . . ℥ss.
Ol. cinnam. . . . . ♏ij. M.
Sig. Tablespoonful *pro re nata*.

The *potion diacode* of the hospitals contains syrup of poppies 30 parts, infusion of tilia 100 parts.

The rum and cognac mark 50° in the scale of Gay-Lussac.

There are a number of formulas of tonic wines. Most of these are flavored with canella, some with bitter orange. [A good *potio cordiale* is a mixture of equal parts of elixir calisaya and madeira, sherry, or port.]

MALARIAL PNEUMONIA.

At other times pneumonia takes on a special character which indicates a malarial origin, and without entering into the disputes so prevalent as to this matter, there is no doubt that marsh miasm is one of the factors in the development and spread of pneumonia. It is in these cases that the tonic *régime* and sulphate of quinine are indicated. Quinine is here both useful and necessary.[2]

PNEUMONIA IN THE INTEMPERATE.

At other times it is the state of the patient that furnishes therapeutic indications; the patient may have been a drunkard, and our hospital service furnishes abundant examples of this kind. That alcohol predisposes to pneumonia there can be no doubt. When we administer alcohol in large doses to animals we note at the necropsy apoplectiform congestion of the lungs, and, in the case of the patient of whom I have spoken to you, who killed himself by swallowing a quart of raw brandy, we observed a great number of apoplectic foci in the pulmonary parenchyma. This fact is easily explained by the elimination of alcohol on the surface of the pulmonary mucous membrane.

This well-nigh permanent congested state of the lungs in hard drinkers gives an explanation of the readiness with which, under the influence of the least exposure to cold, pneumonia is engendered.

Pneumonia in the intemperate calls for alcoholic treatment, and this for two reasons: first, because the sudden suppression of the accustomed stimulus produces a grave depression of the vital forces; second, because, despite the agitation and the activity of the delirium, these patients have very little vital resistance, and fall into a state of profound adynamia, which contra-indicates any spoliative medication. Give, then, and give freely, bark and wines and grog, and you must add chloral to assuage the delirious manifestations.

PNEUMONIA IN DIABETIC PATIENTS.

In other cases the patient is diabetic. Pneumonia is of frequent occurrence in diabetes, is likely to be of grave character, and to terminate by suppuration and gangrene. Here, too, you must prescribe the tonic regimen. You must not think of bleeding nor even of blistering, for it is dangerous to use revulsives in glycosuria. The dietetic *régime* of diabetes must, moreover, be continued while the pneumonia lasts.

PNEUMONIA OF BRIGHT'S DISEASE.

Pneumonia is a frequent complication of Bright's disease. Here, too, you must eschew blood-letting and revulsives, also subcutaneous injections of morphia. The importance of these restrictions you readily comprehend.

PNEUMONIA DURING PREGNANCY.

Pneumonia is a grave complication of pregnancy, and often determines abortion. Although there is a difference of opinion as to the utility of blood-letting in these cases, I nevertheless think that where the congestion is intense, it is well to have recourse to this measure. We must avoid antimonials which provoke uterine contractions and thus favor abortion. When, however, this latter is imminent, and cannot be prevented, then I believe, with Ricau, that tartar emetic may do good; it will kill the child, but it may save the mother.[3]

PNEUMONIA IN THE INFANT.

It remains for me, before finishing this lecture, to say a few words about the pneumonia of infants and of old age. In infancy fibrinous pneumonia is rare, oftener by far you have to deal with broncho-pneumonia. Here you witness the triumph of expectancy, the little patient getting well without any treatment; therefore I cannot too strongly recommend you to be chary in your medication: a little bromide to quiet restlessness; cordial drinks, such as wine and water sweetened, to support the strength; a blister or two; and a little white oxide of antimony at the moment of defervescence. This is about all that it behooves you to do in the lobar pneumonia of little children.

PNEUMONIA OF OLD AGE.

The pneumonia of old age demands always stimulating treatment. Every other medication gives bad results. Bleeding and antimony must be utterly discarded. Give your patient plenty of wine and other good alcoholic liquors, and at the moment of defervescence apply a blister, and give some simple expectorant. These are the essentials of treatment in the pneumonia of old people.

Gentlemen, I have finished what I wished to say respecting therapeutic indications in pneumonia. If I have made myself understood, you see that there do not exist for this disease ready-made formulas or any routine procedure, and that the science and skill of the physician will find their proper exercise in modifying the treatment according to the march of the malady and the symptoms which it presents. We cannot say, in fact, that such and such remedies are good in pneumonia, for what is good in one case may be harmful in another. In this department of internal pathology, then, we witness the practical application of that system of clinical therapeutics of which I make myself the defender, and if it were incumbent on me to sum up in one phrase all that I have set forth in these three lectures, I would say: *There is no treatment for pneumonia, there are only treatments for pneumonic patients.*

— "From all false doctorin', good Lord, deliver us," is the way a poor English woman, unfortunate in her medical adviser, puts it. She told her curate that she never really understood what that passage in the litany meant before, but evidently takes great comfort in the prayer since her new illumination.

---

[1] POTIO EMETO-CATHARTIC OF THE HOSPITALS.

℞ Ant. tart.	gr. iss.	
Sodæ sulph.	ʒ ss.	
Warm water	ʒ viij.	M.

Take in three doses, a quarter of an hour apart.

[2] It has been pretty clearly pointed out these late years that pneumonia has not always for origin the influence of cold, and that besides pneumonia *a frigore*, there is an infectious pneumonia characterized by the serpiginous march of the hepatization, and by general typhoid or bilious symptoms. These facts have been observed in France by Marriotte, of Bonne-Maison, who believes in the specific and contagious nature of pneumonia; in Germany by Jürgensen, Freiderich, and Leichstenstern, in America by Rodman, and in England by Hardwick.

[In America it is held by eminent authorities (as Dr. Austin Flint) that pneumonia is always a specific fever. TRANS.]

[3] Ricau. Thèse de Paris and Bull. de Ther., t. lxxxix., p. 95.

Original Articles.

THE TREATMENT OF A FORM OF PAINFUL PERIARTHRITIS OF THE SHOULDER.[1]

BY JAMES J. PUTNAM, M. D.

The cases which form the basis of the following paper were, for the most part, seen by me together with the late and sadly missed Dr. T. B. Curtis. It was our intention to have published them together, and, in fact, the present paper is, to a great extent, only a reflection of his work.

The principal symptoms which cases of this kind exhibit are the following: —

(1.) Inability to raise the arm above the horizontal plane of the shoulder.

(2.) Spontaneous pain, generally worst at night, and felt either in front of or behind the shoulder joint, or at the neighborhood of the insertion of the deltoid.

(3.) A slight degree of muscular wasting of the deltoid and other muscles of the shoulder itself, as well as sometimes of the arm and even of the hand.

An examination of the patient with his clothing removed, usually reveals, also, the following facts: —

(4.) That any attempt to move the arm at the scapulo-humeral articulation, either by abduction or by rotation, causes sharp and severe pain, and is, indeed, nearly or quite impossible, partly on that account, and partly on account of the reflex spasm which it excites, or which may have been already present. (This persistent spasm is considered by Roustan (vide below) to be rather characteristic of periarthritis as distinguished from true arthritis.)

(5.) That there is tenderness on pressure over certain points about the shoulder, especially over the coracoid process, and just behind and below the acromion, and occasionally over the nerve-trunks of the brachial plexus.

(6.) At the same time there is little or no swelling or other sign of any considerable local inflammation within the joint.

As a rule the deltoid is somewhat flattened, from atrophy, and this, combined with the fact that the arm is usually carried clinging closely to the side of the chest, with the elbow semi-flexed, gives to the point of the shoulder a degree of prominence which is rather characteristic.

A leading question to put to such a patient is to ask him if he can place the palm of his hand on the back of his head, or bring the arm well behind the back. These movements are impossible, and any forced attempt to make them excites sharp pain. On the other hand, the very great mobility of the scapula allows the arm to be carried forward quite freely, giving a false impression of motion at the shoulder-joint.

These patients must have come to other physicians, as they have to me, seeking relief from pain, or from a supposed paralysis of the muscles of the shoulder.

I should hesitate to offer the result of my limited experience as a guide toward the solution of the essentially surgical questions which are involved in their treatment, had it not seemed to me, and to Dr. Curtis as well, that these are cases of the well-known kind that are apt to be referred by the surgeon to the physician and by the physician to the surgeon, each regarding them as a little out of his own department. Doubtless the surgeons see the greater number, and many of them have, without question, overcome the stiffness by forcible mobilization, regarding it as a trivial operation, and as the natural and proper treatment where no active disease is present.

On the other hand, there exists a very common and very just prejudice against forcible mobilization in general, which will only disappear when the conditions which justify it have been definitely ascertained. It is well known that these conditions are different with the different joints, and the facts to which I shall call attention may help to define them as regards the shoulder.

In looking back over record books of the Out-patient Department for Diseases of the Nervous System at the Massachusetts General Hospital for the past three years, I find that I have seen about a dozen. So far as I had studied them at all, I had supposed them to be some form of a noli-me-tangere arthritis up to about two years ago, when Dr. Curtis called my attention to two journal articles in which they seemed to be perfectly described (in essentially the same terms as those which I have used above), and their nature and curability, as it appeared, thoroughly demonstrated. Further study has induced me to give that demonstration modified credence, to be sure, but also to rate it as of real and great value.

The articles in question were respectively by MM. Duplay[2] and Desplats,[3] the former well-known as a surgeon, the latter as a physician. In them the atempt is made to show that, pathologically, this affection is a subacute, or chronic inflammation of the sub-acromial bursa and of the loose, bursoidal, connective tissue beneath the deltoid muscle, often resulting in the formation of adhesions external to the joint, the joint-surfaces themselves remaining unaffected; while clinically it is characterized by impairment or loss of motion at the scapulo-humeral articulation, due, in part, to pain, in part, to limitation of the movement by adhesions, but for the most part to reflex spasm; and, it might be added, to a real reflex inhibition of mucular activity.

Periarthritis, they maintain, is to be distinguished from arthritis by the absence of changes in the outline of the joint and of any swelling characteristic of effusion within it. Swelling may, it is true, be present, in the acute stage, but in that case it is over the upper end of the humerus (moignon de l'épaule), and due to inflammation beneath the deltoid.

Furthermore, it is claimed that if the patient be etherized and the adhesions broken up, the joint is bound to be healthy; that this operation — repeated, it may be, and followed by suitable after-treatment — is sufficient to bring about a cure.

The prognosis in cases left to themselves is, Duplay thinks, absolutely unfavorable.

The unaided influence of time is, he says, very likely to render the adhesions more dense and unyielding; very little likely to remove them.

An energetic after-treatment, consisting in cold douches, manipulation, electricity, and passive motion, is regarded as in many cases absolutely essential to the success of the operation; and the same means if employed early may sometimes prevent the development of the adhesions altogether.

Eight cases are reported by Duplay, in all of which the operation was performed with a greater or less degree of success.

In every case adhesions were found, which yielded to moderate force, leaving the joint smooth, and the motions of the arm (during the anæsthesia of the patient) perfectly free.

---

[1] Read before the Boston Society for Medical Observation, October 16, 1882.

[2] Arch. gén de Méd., 1872.

[3] Gaz. Hebdom, 1878.

In a single case the diagnosis was confirmed by autopsy, the patient having died of an intercurrent disease one month after the operation had been performed, with successful result. The essential lesions found were, thickening of the walls of the sub-acromial bursa, though without signs of old adhesions within its cavity; thickening, roughness, and opacity of the bursoidal connective tissue around the capsule and beneath the muscles, and of all the tendons that converge about the joint. Several of the nerves of the arm were likewise embedded in thickened fibrous tissue. The articulating surfaces themselves were perfectly normal.

This is the proper place to remark that an acute suppurating form of periarthritis is also recognized, and has been well described by Dr. Gibney, of New York.[1]

Anxiety might be felt lest the chronic non-suppurative form might be converted into the latter by too violent mechanical treatment, but, as a matter of fact, nothing of this kind has occurred even in the unsuccessful cases, and those where the operation has given rise to much pain, and has had to be several times repeated.

To this paper of Duplay's, that by Desplats forms an admirable supplement. The latter shows that not only are injuries of the shoulder, as in the cases of Duplay, capable of exciting this periarthritis, but that it may occur as a distinctly rheumatic symptom and yet be amenable, if less readily, to the same treatment.

Agreeing in the main with Duplay's descriptions, he dwells at greater length on certain symptoms, especially the atrophy, which may involve widely the muscles of the shoulder-blade, arm and hand, and is, as he believes on good grounds, due to a neuritis,[2] which, starting in the nerve filaments distributed about the joint, may involve eventually the brachial plexus. I shall refer to other important articles on the subject in the course of the paper.

The questions which have chiefly interested me in this matter are the following: —

(1.) To what extent do all these cases, clinically so similar, form a pathologically homogeneous group? and, especially, can we be sure that true arthritis is not present in some of them?

(2.) Is the prognosis in cases not treated really as unfavorable as has been indicated?

(3.) Is their operative treatment attended by any special dangers? What are the indications in its favor?

(4.) What is the effect of other modes of treatment?

Let me first state briefly the results of my own experience.

I have more or less accurate accounts of twelve cases, which might be ranged under the following heads: (1.) Those left entirely to themselves, one in number. (2.) Those operated on once and cured or benefited, six in number. (3.) Those operated on once or more without benefit, but eventually cured by other means, one in number. (4.) Those operated on and not cured, within the time that they were under observation, five in number. To these may be added one very interesting case now under treatment.

All of these cases have presented themselves since Dr. Curtis first brought the matter to the notice of his friends two years ago. Several of them were treated by him, others by Dr. J. C. Warren, who kindly allows me to use his notes, and I have operated myself upon four patients, besides repeatedly assisting Dr. Curtis.

Under the first head I will mention the case of a coachman who dislocated his shoulder by a fall. The arm was reduced and treated in the usual, though perhaps not the best, manner (vide the observation by Le Fort, quoted below); but after the bandages were finally removed, was found to be almost immovable at the scapulo-humeral articulation by voluntary effort, and great pain was induced by attempts at passive motion.

The patient was encouraged to use the arm, but no special treatment was applied. It improved after a time, but a year passed before the joint entirely regained its freedom of motion.

It is certain that the history of dislocations and injuries would furnish a plenty of instances of this kind. This one at any rate will serve to show that the positively unfavorable prognosis given by Duplay, based, be it observed, largely upon cases of dislocation, deserves to be modified.

It will be noticed that the time occupied in the return to a normal state was a year, whereas one only of Duplay's cases was of as much as six month's standing at the time of the operation, the duration of the rest varying from four to six weeks.

Another case, which strictly belongs under another head, may be mentioned to advantage here. It is that of a woman, of past middle life, in whom the periarthritis of the shoulder came on in the course of the treatment of a Colles' fracture, due to a fall. The usual symptoms were present, including great spontaneous pain and considerable atrophy of various muscles of the arm. No signs of inflammation of the shoulder being present, Dr. J. C. Warren, in whose care the patient had been, moved the arm about at the shoulder, under ether. The stiffness and pain recurring, however, Dr. Warren kindly referred the patient to me for treatment by electricity. This treatment was continued for about two months in all, with a good deal of relief to the pain, though but little to the loss of motion. I then lost sight of the patient, but saw her again recently, and learned that she had continued to improve, and that after a year, or fourteen months, from the time of the injury she had fully regained the use of the arm. Of course it must remain an open question, and one which Duplay would have been inclined to answer in the negative, whether the motion of the arm would have returned if the adhesions had not been once forcibly broken.

Under the head of *cured or benefited* by the operation, I would record the following cases: —

The first is that of a healthy negro woman, twenty-two years of age, in whom the affection of the shoulder was induced twice, by two separate injuries, both being falls upon the sidewalk.

The first accident happened two months before I saw her, and although, as the sequel showed, the local inflammation was but slight, there had been no progress toward recovery, and the patient was suffering from pain at the shoulder and along the arm. This pain was worst at night, or from four o'clock in the morning onward, as is apt to be the case, and was referred to the arm in its whole length and to the hand. It was associated with a sense of numbness and prickling, and — at the time of the early morning exacerbation — with a feeling of coldness. There was tenderness on pressure over various parts of the shoulder and over the brachial plexus, but especially just in front of the point of the shoulder. Passive motion at the scapulo-humeral joint excited sharp pain.

---

[1] N. Y. Medical Journal, 1880.

[2] Compare also Valtat, De l'Atrophie Musculaire Consécutive aux Maladies des Articulations. Paris, 1877.

After various remedies and applications suitable for the treatment of the neuralgic symptoms in themselves had been faithfully but unsuccessfully tried, the patient was etherized, and the arm put through all its physiological motions. No crepitation within the joint was observed, nor were fibrous adhesions distinctly felt to give, as in most of the other cases. From this time forward the patient was free, or practically free, from pain, and the motion of the arm was entirely restored. Some months later she fell again, bruising this shoulder slightly, and the old trouble returned in a measure, but again yielded to another operation. Probably the second fall would not have caused a relapse, had not the tissues remained in a state of impaired vitality from the first, as in Duplay's case, of which the autopsy was reported.

The second case is that of a large, heavy, laboring man, who hurt his left shoulder by a fall upon an icy sidewalk, in January, 1879. He suffered great pain from the moment of the accident, and this continued up to and for some time after the operation, which was done in March, two months later.

Meantime the arm had been seen by two physicians, and diagnosticated as paralysis and as sprain. When I saw him the arm was as if glued to the scapula, but there was no paralysis, the deltoid contracting both under the influence of the will and under the faradic current. In accordance with Dr. Curtis's advice, the same treatment was employed as in the former case, and with like result. I have received a letter from the patient within a few weeks, stating that he uses the injured arm as well as its fellow. Here, also, the adhesions must have been trifling, as their rupture was not felt or heard during the operation.

In neither case was there the slightest inflammatory reaction about the shoulder after the operation.

Of the third case, in which the operation was done by Dr. Curtis, I have no notes, but can say that it was closely the same with the last in history and symptoms.

The first operation gave partial, but only partial, relief.[*] It was repeated by Dr. Homans without ether, with further improvement, but of the final history of the case I cannot speak.

In another case operated upon at the hospital by Dr. J. C. Warren, the result was also quite satisfactory, the patient moving his arm better, though not perfectly well, after the operation, and becoming almost entirely free from pain.[1]

I have not the slightest doubt that further repetitions of the operations, with appropriate after-treatment, would have brought these two cases, likewise, to a favorable end.

A second case of Dr. Warren's, to which he kindly allows me to refer, is especially noteworthy, as showing that the recovery of at least pretty good motion does not necessarily imply disappearance of pain, a symptom which sometimes requires special treatment apart from the operation (Desplats).

This was the case of a man who, five years before, had injured the right shoulder by a fall. He remembers that the use of the arm was impaired for some months, and that he had pain at the insertion of the deltoid.

One year before entering the hospital, while drilling stone, he was again seized with severe pain in the right shoulder, and in a few days had to give up work (a liability to relapse in these cases has already been referred to). Six months later, while lifting heavy plank, he felt a sensation as of "something giving way" in his left shoulder (compare Jarjavay's cases), and began to suffer pain at the neighborhood of the insertion of the deltoid, as in the right arm.

At his entrance both shoulders were tender on pressure. Both arms were freely moved by Dr. Warren, under ether, and adhesions found and broken up. The effect of this operation was to restore a very considerable degree of motion to both arms, and this improvement in motion went on increasing. The pain also, except for a day or two after the operation, was relieved, but persisted to a considerable extent, requiring the use of electricity and other measures for seven weeks, when he was discharged, improved and improving.

Desplats makes it clear that in one of his cases, of which the history was similar to this in some respects, the pain was due to a neuritis, which, originating in the periarthritis, had extended so as to involve the nerve trunks of the brachial plexus, and to call for special treatment.

Finally, I have operated twice, with good result, upon a patient still under observation. The case was of rheumatic origin, and the chances for cure without treatment were almost *nil*.

These cases, together with the eight reported by Duplay and several more by Desplats,[2] Howard Marsh,[3] Bruce Clarke,[4] and others, suffice to demonstrate that a successful issue of this affection is possible enough under operative treatment.

It remains necessary, however, to recognize the fact that the picture is not always so bright.

All of Duplay's cases seem to have been benefited by the operation, combined with the subsequent treatment, though not all completely cured. As much even as this cannot be said of all of ours.

The last case of my own was that of a woman fifty-six years of age, of lymphatic constitution, large and flabby, who presented the usual symptoms, but complained chiefly of severe pain of dull, aching character, which was worst just behind the point of the shoulder. Motion at the scapular joint was not lost, but much impaired. The affection was of spontaneous development, but without other symptoms of rheumatism. After etherization was complete the arm was taken hold of at the wrist and elbow and rotated gently outwards.

Adhesions were distinctly felt, arresting the movement at a certain point. The application of a very slight amount of force, however, so little that the weight of the arm itself seemed the really active agent, was sufficient to overcome them, and they gave way with a series of audible snaps, just as when one pulls up a weed with a number of small rootlets spreading through the soil. During the recovery from the ether the patient was in great pain, which, however, soon passed away in great measure with the help of a little morphia. The next morning she appeared to have gained a little motion, but although the after-treatment of passive motion was immediately begun, and was persisted in as regularly as was practicable, that is, nearly every day for about a week, no permanent gain was effected. Indeed, the pain seemed to have become a little worse, although to judge by my experience in other cases it is not likely that this was a more than temporary result.

---

[1] W. Surg. Recs., M. G. H., vol. cxcii., p. 180.

[1] Gaz. Hebdom, 1878.

[2] St. Bartholomew's Hosp. Repts., 1878.

[3] Ibid., pp. 343, 344.

The Out-patient Department of a hospital is not a place to try after-treatment to the best advantage, especially when, as in this case, the patient lives at a distance, and is in feeble health so that the attendance necessarily entails fatigue. Yet energetic prolonged after-treatment seemed in several of Duplay's cases to have been what really turned the scale.

Still more strikingly is its importance exemplified in a case reported by Mr. Howard Marsh, of St. Bartholomew's Hospital, London.

This was the case of a gen-tleman who fell from his horse while hunting, bruising his shoulder very badly, and dislocating his arm.

He came to London two months afterwards with the limb almost absolutely stiff. The adhesions were broken down, but at the end of a week the joint was as stiff as ever. The operation was then repeated, but with like result. He was then told that he must make up his mind to a stiff shoulder for life, but, being unwilling to accept this verdict, he consulted another surgeon. The same operation was then repeated a third time, and immediately after he was placed under the hands of a manipulator who rubbed and shampooed him for six weeks; by the end of this time the stiffness had entirely disappeared and it never returned again.

One cannot help wondering whether in this case what was called the after-treatment may not have been in fact the primary treatment, and whether it might not have been effective if applied with equal thoroughness in the first instance.

Attention is also called to this point in the excellent paper by Mr. Howard Marsh.[1]

It is certain that, animated by the desire to prove a new operation successful, the surgeon will often apply his after-treatment with a zeal that might be compared to the touchstone of the alchemist, transforming an indifferent into a useful method. Certainly in some of our cases the early action of after-treatment was not glowingly encouraging although it was carried out with some care. Perhaps our methods were not the best; but of that I will speak again later.

I have very accurately in my mind the case of one patient on whom I assisted Dr. Curtis to operate. This was a lady of vigorous mind, though of frail health, and a great sufferer from neuralgia. She was first seen by Dr. Curtis, in consultation with Dr. Calvin Ellis.

The affection of the shoulder was secondary to a severe wrench, which had occurred some months before, and in consequence of which she had been compelled to keep the arm bandaged to the side for a considerable time. For some time before we saw her she had been suffering greatly from spontaneous pain, which was worst at night, and the arm was completely helpless and as if glued to the scapula.

The operation was performed in the usual manner, and distinct adhesions were felt to give way. During the recovery from the ether, and for some hours afterwards, excessive pain was felt, so that more ether had to be given. Passive movements were begun on the next day, and were persistently kept up so far as the state of the patient admitted, which to be sure was very little, but without avail. No motion seemed to have been gained, and after a short time the operation was again repeated, and later, I believe, a third time.

For many weeks the pain in arm and shoulder was certainly worse than before the first operation, though they were materially relieved by prolonged application of galvanism and of ice, as is commonly the case with the pain of neuritis.

As a final result, however, some slight relief was, I believe, obtained from the worst symptoms, and the patient expressed herself as satisfied, and declared that she should recommend the operation to any one else in the same condition. Still it must be confessed that the effects of the operation itself, as distinguished from those of the after-treatment, were not very manifest.

(To be concluded.)

A PROPOSED CHANGE IN THE METHOD OF EXAMINING CANDIDATES FOR THE MASSACHUSETTS MEDICAL SOCIETY.[2]

BY EDWARD T. WILLIAMS, M. D.

I HAVE thought it my duty, as Chairman of the Board of Censors of the Norfolk District, to bring before this meeting some account of a proposed change in the method of examining candidates for the Massachusetts Medical Society. The law as it now exists is contained in sections 1, 2, 3, 20, 21, and 22 of the By-laws of the Society, which fix the manner of electing censors, the times at which their meetings are to be held, and the subjects in which they are to examine, but leaves *to them* the right to interpret the law, and to draw the lines more or less strictly as they see fit. Candidates must simply *satisfy* the Censors, or at least three of them, that they possess the proper qualifications.

This makes each Board of Censors practically responsible to the District Society which it represents, and to no one else. It gives each district practical control over its own board, and this I conceive to be one of the clear constitutional rights of the district societies.

A year or two since, the Censors of the Suffolk District concluded that this system ought to be changed. They sent out invitations to the several district boards, inviting them to a meeting to be held in Boston to consider this question. Failing to get a meeting, they sent another invitation, with the same result. They then appealed to the councilors to call a general meeting of Censors in Boston, which they did, but without the slightest warrant in the Constitution for doing so. The Constitution gives the Council no right whatever to interfere with the functions of the Censors, nor can the Censors legally meet for any purpose whatever except the examination of candidates, which must always be inside of their respective districts. A committee afterwards appointed by the Council to consider this question (among whom was a late president of this Society, Dr. Amory) subsequently reported to this effect. I had previously taken the same ground myself in a letter addressed to the Secretary of the Suffolk Board in remonstrance against the unconstitutional action of the Council and the Suffolk Board.

In consequence, however, of the fault found with the present system by the Suffolk Censors, the Council, at their last annual meeting, appointed another committee (of which another ex-president of this Society, Dr.

---

[1] Loc. cit., page 211.

[2] Read before the Norfolk District Medical Society, October 31, 1882.

Stone, is a member) to consider and report on the whole subject of admission to the Society, and to suggest such modifications of the present system as may be necessary. What action this committee may have taken I know not; but as the rights and interests of the Norfolk District Society are involved in the question, and as no change can be made in the by-laws without ratification by the general Society, it is important to have the whole matter fully understood.

Now, very briefly, what is the change recommended by the Suffolk Censors? A uniform examination for all candidates, or, more precisely, a *written* examination; since it has been repeatedly explained by the friends of the movement that it is a *written* examination which they wish.

What are the objections to such an examination?

(1.) It will take too much time. No physician with any practice to attend to will be able to act as Censor under the proposed plan.

(2.) A written examination in itself is less satisfactory than an oral one to any one who knows how to ask questions. It gives less opportunity to find out a man's weak points. What lawyer, for instance, will be satisfied with a witness's written affidavit when it is possible to bring the witness himself into court? And why not? Because you cannot cross-examine an affidavit. You cannot cross-examine a man on paper. This is the whole case in a nut-shell.

(3.) A written examination favors fraud.

(4.) It will throw too much power into the hands of the Suffolk Censors. To carry out the plan with any semblance of fairness, delegates from all the districts must meet together once or more every year, to prepare examination papers. The delegates from remote parts of the State will certainly not attend regularly, and the whole business will eventually drift into the hands of the Censors living in and around Boston. In this body the Suffolk Censors (the originators of the movement) will be seen to wield the controlling influence. Now the Suffolk Board, as a rule, is chiefly composed of young and inexperienced gentlemen, more learned in the theory than the practice of their art, crammed with the scientific pedantry of the schools, and far less likely than older men to give a fair and practical examination in the real essentials of medicine. It is for this reason that I especially deprecate any change looking to an increase of power in the Suffolk Board, which, from its functions as Censors at large, already exceeds that of any of the district boards.

(5.) The new plan is, as I have sought to show, an invasion of the constitutional rights of the districts, and ultimately of the individual rights of the Fellows. I confess to being one of those who think that the Society has already yielded too many of these rights. As the laws now stand we can neither choose our own officers, call our own meetings, fix our own rates of assessment, nor amend our own by-laws. Worse still, if accused, however unjustly, of professional misconduct, we cannot be tried like free men, before a jury of our peers, but must appear before a packed commission like a court-martial, with right of appeal to the councilors, to be sure, but not to the Society, who must vote on confirmation of sentence *without debate* (By-laws, § 31). Such is the position now occupied by the Fellows of the Massachusetts Medical Society!

Do we not owe it to ourselves to consider carefully before we abandon, without a struggle, one of the few privileges which we have not already thrown away?

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.[1]

BY WILLIAM F. WHITNEY, M. D.

FIBROUS AND HYALINE DEGENERATION.

A form of degeneration characterized as above has attracted the attention of pathologists during the last few years, and a paper by Dr. Vallat,[2] a student of Professor Langhans, gives a comprehensive review of the subject.

This hyaline substance consists, —

(1.) Of a basement substance; and,

(2.) Of a system of canals traversing it.

The first possesses characters which are easily recognizable. It is glancing, homogeneous, with a high refractive index, which is increased by hardening. Its outline sharp; in this respect looking like amyloid, but does not have as high a lustre, nor does it react in the same manner with iodine.

The spaces cause it to appear as flakes of the size of a blood-corpuscle, or as large polyhedral bands, and all gradations are to be found between them.

The cavities or canals have no proper wall beyond the substance itself. If they are comparatively few in number, they assume the appearance of regular channels with net-like anastomoses. The more finely divided is the substance the more indistinct is their outline. Nuclei are usually found in these spaces. They are shrunken or rod-shaped, but can be readily stained with coloring reagents.

The action of the various coloring matters upon the ground substance is not particularly characteristic. Its chemical relations place this substance among the albuminoids. Mineral and acetic acids render it transparent without dissolving it.

The first notice of this substance was made by Schuppel in 1871, although it was not until 1877 that a detailed description was given of it by Langhans. He found on the placental side of the chorion a substance that closely agreed with the one above described, and which he considered as a canalized fibrine. The name of hyaline was first given by Von Recklinghausen in 1879, who considered it as a constituent of cell protoplasm, exuding from this in the form of drops especially at the time of the cell death. He could produce it artificially in the blood after concentration of the tissue fluids, by drying or introducing a concentrated solution of salt.

Several others have studied this process, and as a result it has been found: —

(1.) In the normal placenta.

(2.) In the vessels (thrombi, aneurisms of the pulmonary artery, and atheromatous changes).

(3.) In different inflammatory new formations (diphtheritis).

(4.) In tubercle, and, as the author hopes to show, also, —

(5.) In gummata.

From all the observations made up to this time, it is not possible to determine whether we have to do here with a peculiar condition of fibrine as Langhans thinks, or with a particular substance (hyaline), according to Recklinghausen.

The author especially studied the degeneration as seen in tubercle and in the new formations of syphilis,

---

[1] Concluded from page 466.

[2] Virchow's Arch., vol. lxxxix., p. 193.

Its most constant and characteristic occurrence was in the tubercle of the spleen. In many of these there is to be distinguished with the unaided eye an opaque central spot surrounded by a relatively broad glancing zone of a light brown color (after hardening with chromic acid and spirit.) Often this is surrounded by a highly transparent gray zone, which is found to correspond to an accumulation of cells.

The first formation of tubercle, as Arnold has shown, consists in an accumulation of lymphoid cells in the follicles. In a further stage epithelioid cells with one or several nuclei are found to occupy the centre of the tubercle, with here and there giant cells. The periphery is formed of small round cells.

Between the epithelioid cells there is no intervening substance, while between the lymphoid cells of the periphery there is a fine reticulum, as in the neighboring tissue of the spleen. At this period of full development the hyaline substance commences to form, and always at the centre. Its first appearance is that of small glancing scales closely pressed together. As these are found more and more in the periphery, the central scales become larger and polyhedral, leaving between them fine canals. These canals are largest in the centre of the tubercle and gradually diminish towards its periphery, until they are lost in the multitude of fine scales. In their interior are found contracted star-shaped nuclei. Giant cells are never found within the hyaline mass, but only on its outer edge, as if pushed there by its accumulation.

The next change noticed is the appearance of a little cheesy point in the midst of the hyaline mass, and this gradually extends outward always surrounded by a hyaline zone.

The author is unable to state how this substance comes into existence, he not having been able to convince himself of the direct metamorphosis of the epithelioid cells as alleged by some writers.

A variety of tubercle was also met in which the hyaline mass was separated from the zone of small cells by a fibrous layer. This is the so-called "fibrous tubercle." Here the hyaline was found to pass directly into the fibrous substance, and must therefore be assumed to be directly transformed from that. The central portion of the tubercle before it became cheesy was often occupied by an obliterated vessel.

In the forms thus far described the hyaline substance was only found in the tubercles themselves. But in a third series of cases, foci of canalized fibrine were found directly disseminated in the tissue of the spleen itself. Frequently the presence of giant cells was the only indication that this was of tuberculous origin, aside from the fact of the presence of tubercles in other organs.

A careful study of such centres led the author to the conclusion that the canalized fibrine represented only the considerable thickened and homogeneous reticulum of the lymphatic tissue. The steps in this process as follows: First, a slight thickening of the reticulum with an increase of the transparency, with this, the disappearance of a certain number of cells (perhaps by pressure). The rest of the cells lose their protoplasm (which perhaps contributes to the increase of the tuberculæ). A part of the tuberculæ may coalesce, at any rate they become still thicker and their homogeneous appearance increases. The meshes become narrowed to irregular shaped canals which contain a few shrunken or staff-shaped nuclei.

In places giant cells are to be seen partially transformed into hyaline substance and in other places with their outline preserved but with a total loss of nuclei.

The relation of the vessels to this process is also of importance. As a rule none are found in these hyaline masses, but here and there an artery of pretty large size forms the centre of one of these nodules. The lumen is contracted or entirely obliterated by thickening of the cellular intima. The media and adventitia are completely changed into fibrine. The canals of this with their nuclei traverse the walls in an oblique or perpendicular direction, often forming a delicate net-work with its meshes parallel to the intima. These are in direct communication with the surrounding canals.

Although the reactions for amyloid entirely fail, as before stated, still the process seen here has a very close resemblance to that which has been depicted by Koster and Erberth for the amyloid degeneration of the lymphatic tissue. Yet when they occurred simultaneously in the same organ there was never seen any direct transition.

As a result of all his observations he concludes that the hyaline or fibrous degeneration is frequent in the tubercles of all organs, but especially in those of the spleen, lymph glands, and liver, and is a precursor of fatty degeneration.

It originates in the reticulum of the peripheral zone of the tubercle as well as in that of the spleen and lymph glands.

It further occurs in the place of the epithelioid and giant cells, the first of which are probably directly changed into homogeneous flakes without nuclei.

In the canals there is a stream of lymph from the periphery of the tubercle towards the centre, as was shown by the way in which particles of soot were distributed.

Frequently the walls of the vessels are changed into fibrine. In becoming cheesy the fibrine directly falls into a finely granular mass, or is replaced by numerous nuclei. These latter are to be considered as derived from the nuclei in the canals or else brought in by the lymph.

INFARCTION OF THE HEART.

Ehrlich[1] found, after poisoning rabbits with small doses of nitrophenylpropiolic acid (which has the property of being changed to indigo by reducing agents), a white infarction of the greater part of the left ventricle. Besides this there was cloudy swelling of the solid viscera, with appearances indicating a deleterious action of the acid upon the blood.

The microscopic examination showed the presence also of small infarctions in the papillary muscles of the heart. In these the fibres had entirely lost their nuclei, while those of the connective tissue were preserved.

The substance of the muscle still showed a marked striation. In apparently sound spots there were found single tube-like fibres, which he supposed were filled with fluid, and by which the nucleus was pushed to one side.

In the large blood-vessels which supplied the part were red clots, easily loosened from the walls. In the composition of these were to be seen fibrine, blood disks, and leucocytes lying in the periphery.

He also found infarction of the heart under other relations.

[1] Centralblatt f. d. Med. Wissen., October 15, 1881.

In animals which have died from simple inanition there is not infrequently seen a greatly dilated heart, especially on the right side. In this there occur whitish spots formed of muscular cells, which have undergone coagulation necrosis, and many of them in the stage of calcification.

In such cases where at the same time the respiration was artificially impeded, and thereby an increase of the heart's action brought about, the above changes were most marked. The author thinks that this means that inanition, as such, causes an alteration in the vessels, and that this appears earliest in those organs which work continuously, and that increasing the activity of these organs causes it to be more marked.

THE RESULT OF PRESSURE UPON THE HEART.

Knoll[1] studied the effect of pressure upon the heart by forcing air into the pericardium, mediastinum, or pleura. At the same time the results of direct pressure applied to the breast were also noted. Air forcibly injected into the pericardium produced at first sinking of the arterial pressure and quickening of the heart's action. As after-effect, there was noticed an increase of pressure, with a slowing of the action of the heart. Here the lowering of the pressure depended solely upon the mechanical disturbance of the circulation, while the after-effect resulted from the irritation of the vaso-motor system, for not only the cutting off but also the reëstablishment of the circulation excites the central nervous system, and produces narrowing of the small arteries.

An explanation of the quickening of the heart's action is to be sought in a weakening of the tonicity of the vagus, produced by an irritation of the sensitive fibres of the heart. The slowing of the heart is essentially the effect of an irritation of the inhibitory cerebral centres presiding over the heart.

At the same time there occurred a change in the respiratory movements resulting from a derangement of the circulation in the central nervous system. At the commencement of compression these were a little accelerated and slightly deepened. After a few seconds they became slower, and the expiratory pauses were lengthened. At this stage muscular cramps appeared, forced respiratory actions, and even entire pauses; also nystagmus.

The same sequence was observed when the pleura or mediastinum were forcibly distended.

The author adds to this some consideration of the relation of these experiments to human pathology. There occur at times in pericarditis severe nervous attacks (loss of consciousness, sopor, or even convulsions). These were regarded by the older physicians as frequent and characteristic symptoms of the disease, and which are easily to be explained by changes in the circulation of the brain resulting from the compression of the heart. Also the rapid pulse of a patient suffering from pericarditis results from this. It further appears from these experiments that excessive pericardial effusions, without any complication, can lead to a loss of pulse combined with changes in the respiration. Yet it consists here only in an increased and more easily perceived change in the size of the pulse, which is caused, under normal conditions, by the respiration. The same phenomenon also occurs in large pleuritic effusions. The unpleasant symptoms which sometimes follow the sudden evacuation of large pleuritic effusions are to be explained by the after-effect, when the pressure on the heart is removed.

In like manner, the unpleasant symptoms which arise when the pleural cavity is washed out forcibly can be easily explained by the compression of the heart. Finally, the author thinks that sudden death after pressure upon the chest (as in great crowds, after earth slides, or through intentional violence) are often caused by compression of the heart.

THE EFFECT ON THE HEART OF LIGATURE OF THE CORONARY ARTERIES.

It has often been observed that in some cases of death the only lesion found is disease of the coronary artery, while there is no appreciable change in the muscular substance of the heart itself.

This fact induced Cohnheim[2] to study the effect of ligature of these arteries.

The breast of a dog (properly curarized) was opened and the heart laid bare. Then a branch of the coronary artery was tied, and the effect upon the circulation observed by means of the recording cylinder. The stoppage of one of the principal branches had no instantaneous effect upon the action of the heart. Not until the end of the first minute did the pulse begin to fall; the heart's action became arythmical, at the same time slower, but nevertheless remained of good strength. Suddenly both ventricles stood still in diastole, while the auricles continued to pulsate. The arrest of the ventricles was irreparable, and only broken by a few slight peristaltic movements. The irregularity of the beat was very slight, and the blood pressure changes very little until the sudden fall, due to the arrest of the contractions. This last appeared suddenly and in both ventricles at the same moment. After the arrest the contractions could not be reinstated either while the heart was in the animal or after its removal from the body. It was immaterial which coronary artery was tied.

Such must be considered as the direct and constant result of the ligature of at least one large branch. There are various reasons for not believing that the simple want of blood containing oxygen is the cause of this. The course of the blood curve in death by suffocation speaks against this, — where, after a gradual rise, it falls still more gradually with increments at systole. Moreover, the activity of the heart can be excited again after its arrest in this manner.

Further, in the case of ligature, that part of the heart is stopped which is not rendered anæmic. This could only be explained on the ground of the action of a substance directly harmful to the heart, a true heart poison, which was produced during the closure of the arteries. This is evidently not CO_2, for the most extreme degree of congestion, for example, in consequence of the ligature of the sinus coronarius, existed for half an hour without influence on the heart's action. For the first supposition speaks also the fact that the smaller the anæmic territory so much longer time elapsed before the appearance of the deleterious action on the heart.

These results are of interest in human pathology. The cutting off of small branches is relatively well borne, and leads to a myocarditis with formation of connective tissue. The stoppage of a large branch can produce sudden death by arrest of the heart's action.

---

[1] Lotos ii., 1881. Centralblatt f. Med. Wissen., April 1, 1882.

[2] Virchow's Arch., vol. lxxxv., p. 503.

The same subject has been taken up by French observers,[1] who agree in the main with the results of Cohnheim. In their experiments a simultaneous section of the vagus made no change in the results.

THE RESULT OF LIGATURE OF THE DUCTUS CHOLEDOCHUS.

Beloussow[2] studied this subject under the direction of Cohnheim and Weigert. He experimented upon rabbits, guinea-pigs, and dogs. The longest time that any animal survived was eighteen days.

The liver was jaundiced and slightly enlarged. In its substance were seen yellowish gray spots varying from the size of a pin's head to a pea. These were most numerous from the first to the sixth day. The microscopic examination showed them to represent a partial necrosis of the liver substance caused by the pressure of the bile. Around these nodules appeared a zone of reactive inflammation with the formation of young connective tissue in which were newly-formed gall-ducts. This new tissue gradually replaced the necrotic portions entirely.

In this way is to be explained the cirrhosis of the liver observed by earlier experimenters (Wickam Legg, Charcot, Gombault, and others) after the ligature of the ductus choledochus.

This occurred in entirely aseptic cases, and was in no way to be connected with any inflammation starting from the point of ligature and following up the course of the gall-ducts.

Kelsch[3] records two cases where the retention of bile was followed by cirrhosis, — one following closure of the duct by cholelithiasis and cancer of the gall-bladder, the other in which a dilatation of the gall-ducts was found without any formation of concretions.

MULTIPLE CYSTS OF THE LIVER AND KIDNEYS.

E. Juhel-Rénoy[4] reports the case of a woman sixty-seven years of age who died with symptoms of dyspnœa, weakened heart, and œdema. At the autopsy there was found brown atrophy of the heart, obliteration of the pericardium, and exudation in the pleural cavities and peritonæum. Besides this, the liver was of large size and studded with numerous cysts filled with a clear fluid. The walls of the cysts were smooth, their size varying from that of a hazel-nut to an orange. Very minute cysts could also be made out upon careful examination. Both kidneys were increased in size and crowded with cysts.

Upon microscopic examination an increase of the interlobular tissue was found, especially about the gall-ducts. These last were abundant, in many places obliterated, in others dilated. The origin of these cysts from these dilated ducts was considered as certain.

— Sir Thomas Watson, the distinguished English medical author and practitioner, whose work on the Theory and Practice of Medicine may almost be regarded as a classic, lies in a precarious condition. His advanced age, over ninety years, almost precludes the hope of recovery from suspected cerebral embolism. Though his strength is failing, his mind is quite clear, and he perfectly understands his own position.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

October 2, 1882. Dr. McCollom presided.

TRAUMATIC ANEURISM.

Dr. M. H. Richardson briefly reported two cases of traumatic aneurism, one of the radial and one of the temporal arteries. The radial aneurism was caused by an injury to the arterial wall. It was about as large as a filbert, pulsated strongly, and was slowly increasing in size. The case was sent to the Massachusetts General Hospital, and cured by Dr. John Homans, who ligatured the radial above the tumor. The second case was similar in its origin. The patient was struck over the left zygoma by a plate. The bleeding was profuse, and checked with great difficulty. In the cicatrix of this wound a small pulsating tumor appeared, which rapidly increased in size. The case was admitted to the Carney Hospital, and the temporal artery tied by Dr. Richardson, just in front of the ear, and below the zygoma. The tumor at once ceased pulsating. Its contents were removed by a free incision, and the wound closed by sutures. In both these cases the aneurism was completely controlled and cured by a proximal ligature.

Dr. Porter said: These cases are rare. In the case of the aneurism of the radial the anastomosis with the ulnar is so free and the palmar arch is so large that one would expect that the pulsation would continue after the application of a single ligature. For this reason, in case of injury to the palmar arch, which cannot be treated *in loco*, it has long been recognized as a better operation to tie the brachial than to attempt any operation lower down the arm.

Dr. Norris read the regular paper on

DYSTOCIA; OBSERVATIONS ON A SERIES OF CASES.

Dr. Reynolds said the report of such cases as craniotomy should always include the most minute details. The responsibility of the destructive operations of midwifery is so great that the evidence should be fully elaborated in order to demonstrate the existence of the exigency.

There are many cases of disturbance in the abdomen after labor which do not involve the peritonæum as a whole, but only a localized portion in the vicinity of the uterus. These cases are not grave unless attended with high temperature or quick pulse.

Dr. McCollom referred to a case in his own practice in which paralysis of one leg followed after natural labor, and asked if this result had been often observed after labor either natural or forcible.

Dr. Reynolds had seen no such case.

Dr. C. M. Jones spoke of a case in which in consultation he had applied the high forceps. It required the united strength of the two physicians to effect delivery, and paralysis and partial anæsthesia of both legs followed. The patient could not take a step for two months. Subsequently she made a complete recovery.

Dr. Porter asked how much danger there was of the passage of fluid through the Fallopian tubes in giving intra-uterine injections either for endometritis or after parturition, and in this connection described a case in which injections had been used without inconvenience for ten days, the uterus gradually contracting so that only a No. 9 catheter could be used for the injection tube. The patient, who was suffering from septicæmia, collapsed while receiving the injection on the tenth day, although she subsequently rallied. Would it be possible after this space of time, and so much contraction of the uterus, for a portion of the injection fluid to have passed into the abdominal cavity, or were the symptoms due to shock or to tension of the uterus through inability of the fluid to return?

---

[1] Comptes Rendus, January 10, 1881.

[2] Archiv für Exper. Pathol., vol. xiv., p. 200.

[3] Revue de Med., 1881, p. 969.

[4] Revue de Med., 1881, p. 929.

Dr. Reynolds said he had no positive facts to show that the Fallopian tubes were permeable under such conditions, but he thought it must be possible. Cases similar to that described by Dr. Porter are frequently ascribed to uterine colic, and severe pain and suffering may occur for a half hour or longer without subsequent unfavorable symptoms. He had not personally observed such cases, but they are often reported by others.

October 16, 1882. **Dr. Geo. Stedman** presided. **Dr. J. J. Putnam** read the regular paper on

PAINFUL PERIARTHRITIS OF THE SHOULDER.[1]

Dr. Webber said he had seen a number of cases similar to those described by Dr. Putnam. The patients came on account of pain in the joint, expecting to derive benefit by the use of electricity. I have been accustomed to send them to the surgeons for treatment. When the surgeons have referred similar cases to me I have applied electricity, and generally it has been successful in relieving the pain. I have not been able in any case to carry out thoroughly the treatment by friction, manipulation, massage, etc. I have suggested to various surgeons the question of active, forcible movements of the joints, and have always been discouraged by them on this point. The reader has brought up the subject in a way likely to command attention, and to be of practical value. Similar conditions have come under my observation, arising, probably, from lack of use, as in cases of paralysis. There was considerable pain on motion, and more resistance than the muscular condition alone would explain. The pain may arise from the limb hanging down, the muscles being put on a stretch, and the nerves becoming affected in consequence. I think now, however, that these conditions may be due, in part at least, to the adhesions spoken of by the reader. It is a profitable subject, and worthy of further investigation.

Dr. Bradford said: In regard to the class of cases alluded to by Dr. Putnam, it has always seemed to me doubtful whether they could all be correctly termed "periarthritis."

This diagnosis is based, I believe, on one or two autopsies, which certainly prove that the lesion is correctly described in a certain number of cases, though not necessarily in all.

The affection usually, if not always, results from an injury, is accompanied by stiffness, more or less complete, at the shoulder-joint, and some local tenderness. In other words, with the symptoms met frequently in the milder articular affections, where a blow or injury may cause fixation of the joint by exciting an exaggerated reflex spasm of the muscles controlling the motions at the joint, and where slight intra-articular adhesions follow either as a result from the inflammation occasioned by the blow, as has been demonstrated in experiments on animals, or as a result from the fixation of the joint.

That a joint which is not allowed to move is in an unhealthy condition is well known, and has been proved by demonstration. Within the past two months, in the knee-joint of a patient who suffered amputation of the middle of the thigh for necrosis of the shaft, well-marked adhesions were found. The knee-joint had not been at all involved in the necrosis or ostitis, but had been completely fixed by muscular spasm of muscles of the thigh.

It therefore seems to me possible that some of the cases mentioned may be in reality truly articular in character.

Dr. H. I. Bowditch related the case of a gentleman who had, a long time ago, a dislocation of the shoulder. He had for many months suffered from acute pain and inability to move the arm. More recently, however, the pain has disappeared, and good mobility has returned. The difficulty in this case had been ascbried to rheumatism, and it is a point worthy of consideration if some of the cases such as the reader described may not have a rheumatic element.

In reply to an inquiry by Dr. Reynolds whether all the cases were due to traumatic causes, and whether there might not be difficulty in distinguishing the cases of traumatic origin from those due to rheumatism, and especially rheumatism of the deltoid, the reader said that some of the cases of real periarthritis were undoubtedly of rheumatic origin, but that he did not think rheumatism of the deltoid would prevent passive motion at the humero-scapular joint to the very great extent that is seen in these cases.

Dr. Reynolds took the liberty of recalling to the members of the Society with reference to ordinary cases of severe rheumatism of the deltoid not due to injury, a variety which it must often be difficult to distinguish from those now under consideration, what had seemed to him a very interesting article on that affection, published some years since in the *Archives Générales*, and translated at that time for the Boston Medical and Surgical Journal. The writer in question pointed out the anatomical peculiarity of a very intimate connection of the integument covering the deltoid region, and also of that in the nape of the neck, and at the lumbar attachment of the great muscles of the back with the parts beneath, making it quite difficult to separate the skin at these points from the subjacent structures. It was urged that on account of this fact impressions, as, for instance, of heat and cold, on the cutaneous nerves of these surfaces very readily set up disturbance in the deeper parts. The writer believed that where in wry neck the sterno-cleido-mastoid was thrown into strong contraction the purpose of this behavior of that muscle was merely an attempt to hold absolutely immovable the real seat of distress, the tendons of the trapezius in the neck, and he pointed out a similar rigidity of the borders of the axilla, resulting from an effort to prevent movement of the deltoid. It was added that a frequent exciting cause of rheumatism in the deltoid is "parmi les gens mariés, qui font lit commun," the throwing out from under the bedclothes of a shoulder that had been just before warm and perspiring. Some interest may be attached to this suggestion in the present connection.

Dr. F. H. Brown stated that he had studied injuries of the shoulder-joint in a considerable number of cases in those where dislocation had and had not taken place. While he recognized the fact that periarthritis was present in a large number of cases, and to a certain extent induced both paralysis and pain, he felt that due if not equal importance should be given to other concomitants, to paralysis of the deltoid due to concussion, and to injury to the circumflex nerve and the axillary plexus, and that the pain probably owed part of its existence to synovial effusion into the joint, to neuritis, and to the inflammation of the sheath of the tendon belonging to the long head of the biceps (the "crepitation douleureuse" of Nélaton).

---

[1] See page 509 of this number of the Journal.

Dr. Putnam said in reply that he had no doubt the pathological condition in these cases is often a complex one. Dislocation of the shoulder may unquestionably injure the nerves of the axillary plexus, and blows on the shoulder may paralyze the deltoid through the circumflex nerve. At the autopsy made in the case reported by Duplay, the median and ulnar nerves are said to have been found matted together. Still, he thought the typical atrophy was generally due, as in the case of hip and other joint diseases, to a secondary neuritis, originating in inflammation of the nerve filaments distributed to the diseased tissues. Paralysis of the deltoid was not present in any of the cases observed.

A part of the pain on passive motion certainly might, as Dr. Brown had said, be due to inflammation of the sheath of the tendons, and, in fact, in some of the cases reported by Desplats and others a symptom was found which is, perhaps, attributable to that cause, namely, a semi-flexion at the elbow which could not be overcome without pain.

Dr. Ingalls said: Pertinent to the subject is the case of an inflexible wrist and fingers following a Colles fracture, for which he was asked to prescribe two years ago, and six months after the injury, the patient being an elderly woman. It was not a case which seemed to warrant *immediate* breaking down of the adhesions owing to the age and condition of the patient and her remote residence. Without help from any one, instruction as to manipulation has been carried out persistently. She has now a movable wrist, and the index, middle, and ring fingers can cleverly touch the thumb, and she has quite a firm grip.

Dr. J. F. Bush said that during his term of service in the surgical department of the Boston Dispensary he had seen many cases of pain in the joints, especially that of the shoulder, and while he agreed with Dr. Brown as to the injury of the nerve branches, yet occasionally were seen cases such as had been described by Dr. Putnam. One case in particular he recalled. It was that of a large, heavy woman, who had dislocated her shoulder by a fall. Reduction was easily accomplished; but some time afterwards she returned to the Dispensary complaining of inability to move the elbow from her side, or to rotate the arm without experiencing pain, and manipulation of the shoulder produced local pain. The difficulty was removed by forcibly moving the joint in all directions.

Dr. Fitz suggested that a more accurate diagnosis of the diseases connected with joints and their vicinity, as well as their appropriate treatment, must result from a knowledge of the nature of the so-called inflammatory adhesions.

The prevalent idea of articulating surfaces covered with a smooth membrane directly suggested tough inflammatory bands stretching across the joint cavity, such as were to be found in chronic inflammation of serous cavities. Even a periarthritis was apt to be regarded somewhat in the light of a perimetritis, and the physician imagined himself called upon to destroy bands of adhesions which were nothing else than more or less rigid thickenings of portions of the fibrous tissue surrounding the joint. Dr. Putnam had already mentioned the rarity of adhesive bands of connective tissue uniting the articulating surfaces of the joint, and the so-called adhesions outside the joint were to be looked upon merely as circumscribed thickenings of an otherwise essentially normal fibrous tissue. The inclusion of nerve fibres in such thickened tissue suggested a ready explanation for the persistent pain present, and the happy results of treatment in the cases reported were, perhaps, attributable more to the freeing of nerves from compression or traction than to the tearing of thickened bundles of fibre whose resistance was overcome by the exercise of so little force.

FOREIGN BODIES SWALLOWED.

Dr. Reynolds introduced the subject of swallowing foreign bodies, and said: The profession possesses in its classical treatises accounts of an endless variety of foreign bodies that have passed in safety through the alimentary canal. When, however, unusually large or very ill-shaped bodies are to encounter the delicate structures of the intestine in very young subjects, the attendant often finds it hard to put once more unlimited confidence in the natural powers. It is, therefore, perhaps, not unwise to place on record any such instance.

A girl of eight years, holding between her lips a smooth, oblong stone, as large as the last phalanx of an adult thumb, suddenly threw herself back on the floor, and in so doing swallowed the stone. The enemy was voided at stool between forty and fifty hours later. The child ate heartily after the accident, took no medicine, and suffered neither pain nor disturbance of health. Unfortunately the stone cannot be exhibited, as the nurse, thoughtlessly, threw it away. It was, however, well known, and was easily recognized.

Dr. H. I. Bowditch related a case in which a little girl, three years old, swallowed a leaden button. The parents, being much alarmed, gave her, with the consent of a physician, a dose of castor oil. Afterward nothing special was done, and at the end of a week the button was passed from the anus without suffering. Dr. Bowditch said that in his opinion the oil was unnecessary. Certainly repeated dosing, from the liability to produce ill health, should be avoided. A plenty of substantial, rather loosening food, so as to keep the bowels easily and normally opened, was better. Bullets often lie in various parts of the body, and are harmless. Why, then, be alarmed in such a case as the above?

Dr. Brown said it was bad practice to give cathartics or watery substances in such cases. The aim should be to solidify the fæces so as to envelop the object, and milk would be a good diet for this purpose.

Dr. Ingalls reported a case in which a man had swallowed a peach stone. It had come as far as the rectum, but could not be passed further. As it was too high to be reached with the finger, the patient was etherized, and the stone was extracted by the aid of forceps.

Dr. Bush said that it was the custom with persons who attempted to pass spurious coin to swallow them often to avoid detection. In such cases their diet was composed of hard-boiled eggs, they having found by experience that this diet rendered the foreign body harmless by enveloping it in a coat, and in about three days the coin would be found in the fæces.

Dr. Fitz said that if the junction of the pharynx with the œsophagus was the narrowest part of the alimentary canal, anything which will pass this point will pass through the other parts without trouble. Hence if a body of good shape has been actually swallowed, no alarm need be felt.

Dr. Forster showed an inexpensive arrangement which could be attached to any table or chair for the purpose of facilitating gynæcological examinations.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 30, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

DR. J. J. MASON'S MICROSCOPICAL RESEARCHES ON THE CENTRAL NERVOUS SYSTEM OF REPTILES AND BATRACHIANS.

We are glad to have occasion to chronicle the appearance of a work which reflects great credit on the author, and which cannot but be thought a valuable addition to American scientific literature. Dr. Mason is one of the few among us who, without connection with any institution, devotes himself to scientific studies for their own sake. He has published several magazine articles on the microscopic anatomy of the central nervous system of reptiles and batrachians, and now he has brought out a magnificent volume on the same subject. It is illustrated by more than one hundred full-page permanent photographs of sections. The opinion that photography is inferior to drawing as a means of representing histological facts, has more than once been expressed in the Journal, but we must admit that the beauty of these plates almost compels us to change our mind, or at least to limit our opinion. Dr. Mason, moreover, while furnishing such exceptionally fine photographs, is exceptionally modest concerning them, and aware of the criticisms to which they are subject. He admits that those with high powers are wanting in distinctness, and that no very satisfactory work is to be done with objectives of less than one half inch focal distance. He also recognizes that for the understanding of a section seen through a high objective the use of the fine adjustment is indispensable, and that the want of it is felt in photographs. Nevertheless it cannot be denied that a really good and clear photograph when obtained, and many of these are truly remarkable, carries a conviction with it which a drawing cannot, and is particularly valuable in settling disputes as to the relative size of certain of the larger parts, or of the minuter elements.

The author has not given a dry and minute account of the central nervous system of each of the many animals he has examined; but, besides giving photographs for others to study, he has chosen to consider certain general features. Thus he gives an interesting discussion on the relative amount of gray and white matter in the different regions of the cord, concerning which he truly says, that no explanation has yet been given which accounts for all its variations in different animals. He gives the relative areas of the brachial and lumbar enlargements in many animals, and, although he declines to propose any theory, his facts appear to show that the amount of gray matter in the lumbar enlargement depends considerably on the development of the tail. There are several photographs giving curious views of the cerebellum,

In an appendix Dr. Mason considers a subject concerning which, if we mistake not, he has been involved in a controversy. We refer to his views on the relative size of the nuclei of motor nerve cells. He has summarized his conclusions as follows: "The nuclei of the so-called motor cells of the central nervous system, have, in the same individual, average diameters which are proportional to the power developed in the related muscles."

One of the chief charms of this work is the true scientific spirit and aversion to hasty theorizing, which characterizes the author, as well as the modesty with which he presents his observations.

The book itself is magnificently made up in the matter of type and paper, only a very small number of copies having been printed, and we infer from a sentence in the introduction that the author is indebted to the Smithsonian Institution for assistance in bringing out the work, which must have been a matter of very great expense. We believe that it will be welcomed as a credit to all concerned in its production.

◆

TENTH ANNUAL MEETING OF THE NEW YORK STATE CHARITIES AID ASSOCIATION.

The tenth annual meeting of this State Charities Aid Association was held on the 18th of November, with the Hon. John Jay in the chair. Mr. Charles S. Fairchild, ex-attorney-general, was elected president in the place of Miss Louisa Lee Schuyler, who declined reëlection on the ground of ill health. The expenses of the society for the year were reported by the treasurer to have been $5,139.39, which amount was covered by the receipts. A number of other reports were read, and that of the secretary showed a year of activity in the Central Association and the circle of its local visiting committees throughout the State. The standing committee on children had during the year investigated the causes of the great mortality among infants and young children in the city during the summer months, and had arrived at the conclusion that it was largely due to the adulteration of milk and the impossibility of keeping milk fresh even when originally pure. Consequently the committee urged the establishment in the poorer quarters of the city of depots where fresh milk could be sold at fixed hours and in small quantities. A statement was also given in the secretary's report of the origin and establishment of the system of teaching all classes to give immediate aid in cases of sudden illness or accident.

The First Aid to the Injured Committee established thirty-two classes, of which ten were pay classes, the rest free, giving instruction to one thousand pupils in all. Gratifying reports of the results of these classes had reached the committee, and it is hoped to establish branches throughout New York and other States. The committee on hospitals, in order to meet the frequent inquiries made of them for information on points of hospital construction, had made a collection of plans for hospitals and almshouses to be loaned for practical application.

The committee on the elevation of the poor in their homes had directed its attention to the best methods of helping the poor to habits of self-dependence and thrift, and a conference held for the purpose of obtaining all possible light on this subject had resulted in the formation of the Loan Relief Association, which taught its beneficiaries to regard as a loan every form of help. Five of the papers read at this conference, together with practical suggestions as to the formation of similar associations, had been issued as Document No. 29 of the Association's publications.

In counties where new poor-houses had been built the visiting committees had interceded for proper hospital accommodations, and for competent nursing and other reforms, and in Rensselaer County the suggestions of the local committee had been regarded in the better model on which the new buildings were constructed. The methods of the Association, it was stated, were attracting very general notice, both at home and abroad, and inquiries from fourteen States had been made for its publications. The London periodicals had reproduced its documents, and the *Charity Organization Reporter* had printed a series of articles upon the Association, quoting from its publications, and strongly advocating the securing of legal right of entrance to volunteer visitors to the English poor-houses.

◆

THE USE OF TOBACCO BY BOYS.

A DAILY contemporary presented, a few days since, the results of inquiries relative to the use of tobacco among the Boston school-boys, with figures less startling than those which we recorded last week, but still giving reason for serious consideration.

The head master of the Boston Latin School thought that about half of the boys in his upper classes, averaging from fourteen to eighteen years of age, used tobacco to some extent. A grammar school teacher in Roxbury said that the number of smokers had about doubled in his school in the last sixteen years, and gave forty per cent. as a high estimate of the proportion. He said that smoking was more prevalent in his younger than in his older classes. In East Boston, in a grammar school of four hundred boys, including one primary class, $33\frac{1}{3}$ per cent. were found on investigation to use tobacco more or less frequently. In Charlestown, in a grammar school of three hundred boys, most had smoked once or twice, but only 13.5 per cent. smoked or chewed habitually.

Of two schools of equal grade at the North End and on the Back Bay the former was estimated to have about thirty-three per cent. of smokers in its upper class, and the latter but very few if any. The master of the Boston English High School believes there is but little smoking among his boys, but it strikes one as at least surprising that there should be such a difference between the habits of the pupils of the High and Latin Schools, both occupying the same building, both representing a very similar social class, and the High School certainly showing no superiority over the Latin in the moral and social influences brought to bear upon its pupils. The statistics available in regard to this question are evidently not to be entirely relied on.

◆

THE WARREN TRIENNIAL PRIZE.

As will be seen in the advertising columns the Warren Triennial Prize will be awarded during the coming year, provided any competitor sufficiently worthy shall be found. The subject is one which will interest all practicing physicians, and it is to be hoped that the unusual value of this prize, four hundred dollars, will stimulate some of our young men to prove to the world that Americans are capable of producing the best quality of original work. The nature and mutual relations of the derangements in the circulatory and secretory organs in chronic Bright's disease is a field of research on which much valuable light can still be thrown in spite of the vast amount of labor which has been expended upon this complicated physiologico-pathological problem.

The two prizes that have been awarded since the foundation of the fund have both gone to Philadelphia. It is to be hoped that a third will not be allowed to go to that enterprising city without a struggle.

◆

MEDICAL NOTES.

— The *Centrulblatt für klinische Medicin*, which has been published for a couple of years at Bonn, under the editorship of Professors Rühle and Finkler, will henceforth appear at Leipzig. Some of the best-known German clinical teachers (Frerichs, Gerhardt, Leyden, Liebermeister, Nothnagel, Rühle, Binz) are associated in the management, while the direct editorial supervision is intrusted to Professors Brieger, Ehrlich, and Fränkel, of Berlin, and Finkler, of Bonn. In its new form it is hoped that this *Centralblatt* will render clinical medicine the same service that the better known ones have done so acceptably for their departments. The new publishers are Breitkopf and Härtel.

— At the exposition in Cincinnati during the past fall a record of the visitors' weight was kept. Taking the mixed crowd, the men averaged 154.92 pounds, and the women 130.87 pounds. This beats the Boston weight taken in 1864. The men there weighed 141.5 pounds, and the women 124.5 pounds. The Kentuckians visiting the Cincinnati show averaged 158.43 pounds, and the Kentuckiennes averaged 133.76 pounds — a higher average than from any other State. Government statistics show the inhabitants of Kentucky and Tennessee to be the tallest people in the world. The climate and food in the two States are similar. Blood from the British Isles and abundant native beef and bread are the sources of this superior size, as well as of the extraordinary beauty of the women of these central States. — *Louisville Medical News.*

— A pleasant reception to Dr. John P. Gray, superintendent of the State Insane Asylum at Utica, New York, was given at the house of Dr. Charles D. Homans on Friday evening, November 24th.

NEW YORK.

— The annual meeting of the Boards of Governors and Lady Supervisors of the Woman's Hospital was held November 15th, when the usual reports were read. During the year 147 patients were discharged cured, and 219 improved; 122 remained under treatment, and it was stated that the hospital buildings were entirely too small to accommodate all the cases applying for admission.

— The *New York Times* has recently published a carefully prepared article on the church charities of the city, in which it gives an accurate *résumé* of the work of each denomination, and from which it appears that the Protestant Episcopal Church occupies the leading position in this direction. "It may be observed at the outset," the writer says, "that those denominations are doing the most effective work whose structure is most organic. Where there is large individualism there is apparently little for the masses. . . . So far as New York is concerned, and its local charity work, the Episcopal Church stands preëminently to the fore. As a matter of fact, its work is greater than is done by all other Protestant denominations combined. This is a record worthy of emulation, and should other denominations profit by what is now brought to their attention it can do them no harm, and may do the poor and unfortunate an immense amount of good. . . . Catholic charity work is even more conspicuous than that done by the Episcopal church, but this conspicuousness is, in part at least, deceptive. It is true the work is done under Catholic auspices; there is also Catholic self-sacrifice to carry it forward; but the 'sinews' are largely furnished by the community at large." Among the medical institutions under the charge of the Episcopal Church are enumerated St. Luke's Hospital, at which, during 1881, were treated 1665 patients, of whom 1358 belonged to the free class; St. Mary's Free Hospital for Sick Children (founded in 1870, and recently enlarged at an expense of $36,000), where about 200 patients are annually treated at an expense of $10,000; the House of Rest for Consumptives at Tremont, where 114 patients were treated during the year 1881; the House for Incurables at Fordham, and the House of the Holy Comforter, established for the reception and care of incurable women and female children.

— The New York County Visiting Committee for Bellevue and other public hospitals in its report to the State Charities Aid Association on May 11th complained of certain existing abuses in these institutions, and at the first general meeting of the Association since the report was made, which was recently held, it was stated that little or nothing had been done towards correcting these abuses. In regard to Bellevue Hospital it was complained that the defects from bad plumbing grew constantly worse, increasing the unpleasant smells in the wards, while the rats and mice added to the defective plumbing by gnawing away the rotten closets. It was thought probable that the Commissioners of Charities and Correction could not remedy this state of affairs except by tearing down the old buildings, which were, as a rule, overcrowded, and erecting good pavilions on the site, which was believed to be an admirable one. The food at Bellevue, it was stated, was on the whole satisfactory, great improvement in it having been made in the last few years, but there were still too few vegetables provided, and the patients would often prefer salt fish to the constant fresh fish now supplied, which, indeed, was rarely ever absolutely fresh. The complaint of the need of an elevator at Charity Hospital, Blackwell's Island, was reiterated, and there seemed to be no excuse for there not having been one there long ago. The patients were still carried up and down the stairs, and were often compelled to walk, it was stated, when scarcely able to do so. In regard to the Homœopathic Hospital on Ward's Island, it was complained that a hundred and fifty pigs were kept in the immediate vicinity of the institution, and that the stench arising from their pens was almost unendurable.

— The regular quarterly meeting of the State Board of Health was held at Albany on the 18th of November. The question of nuisances affecting health caused by sawdust in streams, lakes, and public waterways was referred to the attorney-general for the preparation of suitable amendments of the law to meet such cases. The petroleum nuisances at Hunter's Point and Newtown Creek were also considered, and measures taken for continued inspection. The infractions of the laws to prevent adulterations of food and drugs, and to regulate the standard of kerosene oil, were discussed, and referred to the attorney-general for aid in their enforcement. The Sanitary Committee reported that since the last quarterly meeting ten samples of drinking water had been examined by the public analyst at the request of the local authorities, and that most of the samples were found to be unwholesome. In regard to dangerous kerosene oils, the committee reported that since the last meeting three accidents had been investigated by Inspector

Colby. Two resulted in loss of life, and all were caused by oil which was found to be below the legal standard. Of one hundred and forty-five samples of oil purchased at one hundred and twenty-three stores in Brooklyn, only five were up to the required standard, and twenty-two emitted combustible vapors at the ordinary temperature. Mr. J. N. Partridge, fire commissioner of Brooklyn, was reported as having adopted the instrument selected by the State Board of Health for testing oils, and as being willing to prosecute offenders in future. It was stated that the law was now uniform for all parts of the State except the city of New York, and it was hoped that the State instrument would be adopted by the fire commissioners there also. At the conclusion of the report it was resolved that the Sanitary Committee should institute prosecutions at once for violations of the law.

— Dr. John Shaw, medical superintendent of the Brooklyn Lunatic Asylum at Flatbush, has just made his annual report to the Commissioners of Charities and Correction. It shows that the number of patients admitted during the year ending August 1, 1882, was 354, while the number discharged was 347, and of those who died 91. He reports that a number of improvements have been made in the institution, and asks for additional land for farming purposes, as there are at least a hundred patients whose condition would be improved by out-door work. Sixty-four patients had recovered and been discharged during the year, and eighty-five were improving.

— The world of science has met with a severe loss in the death of Prof. Henry Draper, the well-known physiologist and astronomer, which occurred, after a brief illness, on the 20th of November. He was just in his prime, having been born in Prince Edward County, Virginia, on the 9th of March, 1837. When he was three years of age the family moved to New York, where his father, Prof. John William Draper, had been appointed to the chair of chemistry in the University. He was graduated in the medical department of the University in 1858, and after spending a few months in scientific study, and serving for a year and a half upon the medical staff of Bellevue Hospital on his return, was elected, in 1860, to the chair of physiology in the academic department of the University, a position which he retained until his death. In 1866 he was appointed professor of physiology in the medical department also, and became the managing officer of that institution. It was during his incumbency, which lasted until 1873, that the new building of the medical department, in the place of that destroyed by fire, was erected, the collections and apparatus were replaced, and the school raised to its present flourishing condition. Upon the death of his father, in January last, he was elected to the vacant chair of chemistry in the academic department of the University, but he soon resigned the position on account of the time which its duties took from his original investigations. He had made at Hastings on the Hudson the largest telescope in the United States, an equatorial instrument of twenty-eight inches aperture, whose construction has been described by President Barnard, of Columbia College, as "probably the most difficult and costly experiment in celestial chemistry ever made;" and the laboratory connected with his residence in New York is one of the best equipped in the world, furnished as it is with an infinite variety of the most complete and expensive apparatus, much of which has been of his own invention and construction. He is best known for his astronomical researches and his brilliant achievements in celestial photography, which have won for him a world-wide reputation. His services as superintendent of the photographic department of the commission appointed by Congress in 1874 to observe the transit of Venus were recognized by the striking at the Philadelphia Mint of a special gold medal in his honor.

PHILADELPHIA.

— The continued sickness of Dr. Charles T. Hunter, demonstrator of anatomy at the University of Pennsylvania, has led to the temporary appointment of Dr. J. T. Deaver to fill his position. Dr. Richard H. Harte has been appointed demonstrator of osteology.

— After an exciting canvass for the positions on the hospital staff of the Jefferson Medical College rendered vacant by the election of Drs. Gross and Brinton to professorial chairs in the College, the board of trustees, at their meeting held October 22d, elected Dr. O. H. Allis and Dr. Joseph Hearn surgeons to the institution.

— An interesting medico-legal case was brought to the Pennsylvania Hospital last week in Dr. DaCosta's wards. A man of intemperate habits was found drunk on the streets, and soon became comatose. He was brought to the hospital with symptoms of compression of the brain without evident hemiplegia, but with irregular pupils (right strongly contracted), and stertorous respiration, followed by death. There was no discernible wound of the scalp. A hæmorrhagic effusion under the membranes, coinciding with a fracture of the right parietal bone, was found in the interior of the left hemisphere, and also a recent clot. It was believed that the small clot first caused apoplexy, and in falling the fracture of the skull was produced. It is further interesting as showing the relation between alcoholic poisoning and cerebral hæmorrhage.

— The following important measure for the prevention of the spread of contagious diseases will be recommended to the coming session of the Legislature of Pennsylvania for action by the judicial committee to which it had been referred for consideration. The committee approved the ordinance to prevent the spread of contagious diseases. It has reference to Asiatic cholera, relapsing fever, yellow fever, typhus or ship fever, cerebro-spinal meningitis or spotted fever, small-pox and varioloid, scarlet fever, and diphtheria. Persons afflicted with any of these diseases are prohibited from entering a public vehicle or assemblage; the sale of infected bed-clothing or other articles is disallowed, and a fine is imposed for permitting any but the immediate family to attend the funeral of a person who dies of such complaints. Any one who lets a room, house, or part thereof, in which any person suffering from contagious disease has been, to any other person without previously disinfecting according to law is liable to a penalty of $100.

— The Philadelphia Society for Organizing Charity held its fourth annual meeting November 21st. The report of the Board of Directors stated that during the fiscal year just ended the receipts of the Central Association amounted to $13,728.22 against $5731.32. in 1881. The expenditures were $9912.09 against 5731.32 during the previous year.

It was stated that the twenty-two local organizations, established chiefly for investigation and the benefit of other institutions, are still largely occupied with direct relief. The receipts of these district associations aggregated $24,436.03, all of which was expended except $407.74. The Directors desire it to be understood that this money comes from contributors who wish a fair trial given to the experiment of seeing what can be done to prevent pauperism, uplift the dependent classes, protect the community from fraud and imposture, and save charity funds from misdirection.

— Diphtheria has been more prevalent and fatal than usual, there having been 930 deaths thus far this year, and they will probably exceed 1000 by December 30th. Last year the mortality was 475 cases, and in 1880 it was only 323. The Board of Health will shortly issue a set of brief rules for the sanitary management of cases of diphtheria for general distribution, especially insisting upon the communicability of the disease and the importance of isolation. The disease is particularly malignant in the suburban portions of the city, especially in Frankford.

Miscellany.

THE NATIONAL BOARD OF HEALTH.

Mr. Editor, — My attention has been drawn to your editorial of the 9th of November relative to the National Board of Health. It seems to me that you have overstepped the bounds not only of courtesy but of exact truth when you say "that dissatisfaction has become somewhat general in the medical profession, and in health boards, at least, in this part of the country." Where is the evidence of this? I do not find any. I have never seen public demonstrations of that kind "in this part of the country." You, as editors, may have seen such. If you have, you should present them; otherwise I must think your estimate of medical public opinion is, in your imagination, rather a positive fact.

Then, too, your assertion that it "was an avoidance of responsibility, *if nothing more*, for the Board to ask the opinion of the Public Health Association whether its members should resign, seems to me offensive in its insinuations. What, pray, is the "nothing more"? Your editorial will gratify every member of Congress that voted against farther trusting the Board. It would justify the gross insult heaped upon the Board by President Arthur.

I am not a defender of all the proceedings of the Board, and yet I am not sure that they have not acted more prudently than I should have acted if I had been smarting under such an insult from the head of the nation. I fear I should have resigned forthwith, and have urged all my colleagues to do so. For reasons which the Board deems sufficient, the present members believe that the Public Health Association had a large influence in the selection of themselves as members of the National Board. Surely an appeal to the Association under such circumstances does not appear to me so widely improper as to justify the language of your editorial.

I remain very truly yours, Henry I. Bowditch.

[Dr. Bowditch's letter does not answer our criticisms, we have no change to make in our statements, and would be ready to substantiate them if it seemed necessary. — Ed.]

REMARKS MADE AT A SOCIAL MEETING OF THE MASSACHUSETTS MEDICAL BENEVOLENT SOCIETY — ITS TWENTY-FIFTH ANNIVERSARY.[1]

Perhaps, Mr. President, it were better for me to answer your summons in the words of "My Double,"[2] that, "I agree, in general, with my friend the other side of the room," that, "there has been so much said, and, on the whole so well said, that I will not occupy the time," but, as several professional incidents occur to me illustrative of the reason for the existence of such a society as this, and the need of it, I may, without impropriety, relate them on this occasion.

When I was Secretary of the Massachusetts Medical Society a worthy out-of-town member died owing the Society two or three annual assessments. The committee having charge of such matters were in doubt, and asked aid of two of his former neighbors and associates. "He had a good practice," said one. "He rode a great deal, and was prosperous." "Yes," added the other, "he was successful, and must have left considerable property — as much, I should say, as six or seven hundred dollars!" Think of it, friends; six or seven hundred dollars as the result of a life-long successful practice, of much labor, and a great deal of riding! What a legacy for surviving family and dependents! The committee never made a claim on that "considerable property."

While a medical student I was much and kindly assisted by a prominent practitioner, residing not a dozen miles from the city. He had been in practice forty years in a thriving town, without a rival; his rides often extending into neighboring villages. He was prosperous, and had accumulated; yet he told me that had he kept a hired man to take care of his horse and vehicles, the pay of this man would have consumed all that he had been able to save of his income! That is to say, by doing the work of a hired man, in addition to that of his profession, he had been able to save up a hired man's wages.

"Rouse up," said members of the family to one of the first physicians of France, then on his couch, sinking under most painful and wasting malignant disease, — "rouse up — a patient is waiting. Go earn a few francs — there is not any bread in the house!"

It may be that the public require the information, but I need not tell the members of this Society that the medical profession is not one for the acquisition of wealth. Indeed, one may well say in common street phrase, "there's no money in it." One of my elders given to such investigations once told me that if any in the profession were seemingly rich, their accumulations were due to parsimonious habits, small savings with fortunate investments, the rise in value perhaps of the land on which they had located, rather than directly to professional fees, no matter how valuable their practice might appear to be. Indeed, we may add, it may be reasonably doubted whether even in the city, where fees are nominally the largest, the average income of the profession allows a greater margin for savings than that of the laborer who sweeps the streets or carries out the garbage.[1]

---

[1] By Dr. B. E. Cotting. See Journal, November 2, 1882, p. 429.

[2] My Double and How He Undid Me, by Rev. E. E. Hale, D. D.

Besides, the community as well as the profession should be fully aware and ever keep in mind that he who practices medicine, wholly or principally, as a means of money-getting, to that extent miserably degrades himself and his calling, which, as an elegant French writer has said, "is one of the noblest of professions, but the meanest of trades."

Furthermore, the *animus* with which the profession is followed has a wonderful effect on the man himself. An aphorism asserts that "women are either devils or angels." Whether said as a truth or for effect, as by an advocate for his client in a bad case, it matters not; but this may be averred, that any one who practices medicine in its true spirit may be a messenger (an angelus) of mercy to *individual* sufferers, and in greater emergencies possibly become "more than armies to the *public* weal," — but he will not get rich by it! While, on the other hand, the money-seeker, if any such by mistake adopt medicine for their purpose, however degrading his methods may be or how *satanic* their effect on himself, will not be likely to accumulate much "for a rainy day," or to be quarreled over and "cut up" by his descendants.

Since these things are so, and since the members of the medical profession must of necessity work more for the good of others and the community than for their own immediate selves or their dependents, it inevitably follows that there will be an urgent need of such a society as this, and that we have a patent right to ask aid for it of those whose callings lead directly to wealth. Nor shall we ask in vain. Our rich men seem to take a peculiar or personal delight in appropriating of their surplus to such purposes, aware that what they thus give *they save.* You have only to make known the necessity, and the means for relief of it will soon be forthcoming.

In the present instance you can well ask of their abundance since you have already "cast in of your penury;" while the good even now resulting from your small beginnings is a moving, an unanswerable argument in the appeal. As the treasurer has told us, your annual mite, small as it seems, has carried comfort to the indigent, has thrown a golden ray into gloomy chambers of starving despair, and has in fact softened down even the sharp edges of the black, appalling shadow of approaching dissolution itself.

LETTER FROM LONDON.

LONDON, *November* 9, 1882.

MR. EDITOR, — The serious, probably fatal, but happily almost painless indisposition of the most highly esteemed Nestor of modern medicine, Sir Thomas Watson, is a topic that just now occupies a most prominent place in the thoughts of the profession to which he has so long been such a bright ornament. At the very commencement of this attack some three weeks since, when after returning from a Sunday morning divine service he attempted to rise from his arm-chair he almost fell to the left side in consequence of a sudden loss of power in the lower extremity of that side, he was seen by his old pupil and dear friend, Dr. George Johnson, to whom he remarked: "This is the beginning of the end." Sir Thomas has since kept his bed, and has declined to recognize the paralysis which is confined to the left leg and the left side of the face, causing a deviation of the protruded tongue to the right. There is no loss of sensibility, no pain, and happily no impairment of the faculties. The distinguished patient is in his ninety-first year, and is almost impatient for the end of his so happily and exceptionally prolonged life. Taken ill at the house of his only son, a barrister, whom he was visiting, the invalid has been surrounded by those nearest and dearest to him; and it is pleasant to know that his admirable disposition is as much appreciated in his home circle as are his many fine qualities by his professional brethren. For the last three days Sir Thomas has had the services of a trained nurse, though of course the loving attention and devotion of his companion and only daughter is unremitting. That this valued life can be long continued can scarcely be wished in the face of the patient's definite and unswerving desire to pass away speedily and easily; moreover, his repugnance to all forms of nourishment is so strong that he will take nothing more than a little milk, and is daily growing perceptibly weaker. His notoriously unselfish character probably goes far to explain his unwillingness to survive his recent infirmity for many weeks, and is painfully manifest in his unwillingness to be attended to. On Tuesday last he began to be troubled with a frequent desire to micturate, which was at that time attributed to irritation at the neck of the bladder, brought on by the acidity of the urine, in which there had been much uric acid since the diet has been solely milk. Yesterday there was so much discomfort that Dr. George Johnson went down from town especially, but on arriving found that Professor Lister had been telegraphed for by the particular wish of Sir Thomas, who would not credit that his bladder needed emptying, and who was firmly impressed with the belief that he was suffering from a calculus, which would have to be removed. However, the passage of a catheter immediately after Professor Lister arrived gave complete relief, and demonstrated that the suffering had been due to retained urine.

Thus we have another example of the oft repeated experience that the most able physicians are of all persons the least capable of reading aright the symptoms presented in their own persons. Not one of the least estimable of Sir Thomas Watson's many glorious characteristics, has been his singular ability to keep his extensive medical knowledge, and the opinions based thereon, untrammeled by tradition, when tradition was opposed to recent research; thus, without flowing in the tide of medical fashion, his teaching, always based on trustworthy observation, kept pace with the established medical facts of the day, whether they were clinical, microscopical, or purely scientific. I suppose there can be little question that his universal esteem in our world-wide profession was very largely due to the real worth and unsurpassably beautiful style and clearness of his lectures on the practice of medicine. No medical writing has yet equaled that of him who now engages our tenderest thoughts. None can ever outstrip it, for elegance, fervor, soundness, power. beauty, or clearness; and I can recollect no technical work, save Sir James Paget's Pathology, which can be named in the same breath with anything from the pen of Sir Thomas. The unexampled popularity in the profession of his lectures was such as to startle their publisher into an almost unparalleled act of grace, such as I shall have to record in a future letter; for it is my hope to give your readers the earliest connected record of this glorious life, which will be found to teem with interest. His lectures are probably the last that will prove a successful attempt to embrace comprehensively the practice of medicine in the work of one author. Every edition of those lectures must have a lasting and ever-increasing value for the entire English-reading medical population of the world. The various additions in the last edition alone testify to the thoroughness of this great master's comparatively recent work. Therein we find much of value inserted on the modes of sudden death, including death by embolism of the pulmonary vessels; also a singularly wide-minded and lucid reference to the ophthalmoscope in cerebral disease, and modernized views on cholera. However, leaving alone the professional facts of Sir Thomas's life, there will be much of interest in tracing the earlier career of one who was a school-fellow of Bishop Bloomfield at Bury St. Edmunds, and became a Fellow of St. John's College, Cambridge, at a time when there was only *one* other " Fellow " who was not in holy orders.

---

[1] Since the meeting, an eminent clergyman told the speaker that he once investigated the incomes of physicians in one of the larger cities of another State, and found that, after deducting expenses necessary to the practice of the profession, they did not annually receive, on an average, more than workingmen in the same city. — *Militia est potior.*

Sir Thomas's recent symptoms would be fully accounted for by certain thromboses which might be expected to occur in connection with such advanced atheromatous degeneration as is here present.

◆

DR. DOUGLAS GRAHAM ON MASSAGE.

Dr. Douglas Graham, of Boston, has a judicious article on Massage: Its Mode of Application and Effects, in the October number of the *Popular Science Monthly*. Massage is a form of therapeutics about which a great deal of vague nonsense is talked and written; it is therefore timely that a valuable remedial agent should be protected from a reaction likely to arise against the exaggerations of ignorant enthusiasts and the pretensions of quackish manipulators. We welcome from an educated physician a temperate and expert statement of the proper methods of practicing massage and of the results which may reasonably be expected from its use.

Dr. Graham thinks that massage is less cultivated in France than formerly, but that considerably more attention is being given to it in Germany. As to the way in which massage is regarded, and as to its condition in the United States, he says: —

" Except among very few, — epicures in this matter, if one may so speak, — there is as yet but little evidence of a desire to place massage, and those who do it, on their merits alone, irrespective of the policy of employing persons who are only rubbing machines, or of tolerating obnoxious individuals so long as the poor patients' minds are satisfied. This is too often the case, and then massage is said to have failed and valuable time is lost, when, if it had been properly applied, it might have been successful; or, on the other hand, perhaps it should have been omitted and other remedies employed. The writer of this, in a recent paper on the History of Massage, has said: 'In almost every city of the United States, and indeed of the whole civilized world, there may be found individuals claiming mysterious and magical powers of curing disease, setting bones, and relieving pain by the immediate application of their hands. Some of these boldly assert that their art is a gift from heaven, due to some unknown power which they call magnetism, while others designate it by some peculiar word ending with *pathy* or *cure*, and it is astonishing how much credit they get for their supposed genius by many of the most learned people.' Let a fisherman forsake his boat, or a blacksmith his anvil, or a carpenter his bench, or a shoemaker his shop, and proclaim that he has made the wonderful discovery that he is full of magnetism, and can cure all diseases, and, be he ever so ignorant and uncouth, he is likely to have, in a remarkably short space of time, a large *clientèle* of educated gentlemen and refined ladies. It is not meant to imply that the previous occupation of such people is at all to their discredit, but were they capable of giving a rational explanation of their doings the halo of mystery would be removed from around them, and their prestige and patronage would suffer a sudden decline.

" In Boston and Philadelphia, and perhaps in other cities as well, efforts have been made by physicians who are thoroughly familiar with massage to instruct intelligent nurses and others how to apply it, and at the training schools for nurses the pupils receive some general instruction in the matter. In this way something has been accomplished to bring massage within the rules and regulations of common sense and rational therapeutics. But still there is great room for improvement even in this direction, for it is but too often the case that after one or two persons are specially trained to do massage they are requested to give instruction to some of the pupils at the schools for nurses and to others, a few of whom, after having received some general desultory lessons, are in turn delegated or relegated to teach others, and so on until, by the time massage reaches the needy patients, there is often little left of it but the name. Hence it is not to be wondered at that many a shrewd, superannuated auntie, and others who are out of a job, having learned the meaning of the word massage, immediately have it printed on their cards, and keep on with their 'rubbin'' just as they always have done."

Dr. Graham states that "according to the requirements of individual cases massage may be of primary importance or of secondary importance, of no use at all, or even injurious. Concerning the extent of its usefulness it may with safety be said that at tolerably definite stages in one or more classes of affections in every special and general department of medicine, evidence can be found that it has proved either directly or indirectly beneficial, or led to recovery, sometimes when other means had been but slowly operative or apparently had failed altogether. In view of these facts it need hardly be said that those who would properly understand and apply massage should be familiar with its past and present literature; they should also be familiar not only with the natural history of the maladies in which massage may be applied when left to themselves, but also with the course of these affections when treated in the usual approved methods, so that improvements or relapses may be referred to their proper causes. Moreover, they should know something about the methods of others who have any claim to respectability in their manner of applying massage, so as to compare them with their own. And yet all these qualifications may fail if the operator has not in addition abundance of time, patience, strength, and skill, acquired by long and intelligent experience. Measured by these requirements I fear that good *masseurs* (manipulators) are scarce."

After describing the different methods of practicing massage, and explaining, as far as possible, the results which may fairly be expected, and the processes by which these are produced, Dr. Graham concludes that, "discuss any therapeutical agent as we may, there is something still peculiar to each that evades expression by tongue or pen. Of what use is it to describe odors, tastes, sensations, sights, and sounds? They can only be comprehended by smelling, tasting, feeling, seeing, and hearing. Just so with the peculiar calm, soothing, restful, light feeling that so often results from massage, which cannot be understood until experienced. It doubtless arises to a great extent from the pressure of natural worn out *débris* being speedily removed from off terminal nerve filaments. Furthermore, massage excites and awakens the *muscular sense* in an agreeable and beneficial manner such as nothing else does, and we know that the state of our muscles indicates and often determines our feeling of health and vigor or of weariness and feebleness. To many minds a more satisfactory way of explaining the phenomena produced by massage would be by saying that they all occur in consequence of 'magnetism,' by which they have an indefinite understanding that this is some sort of imperceptible ethereal fluid passing from one person to another. Such an explanation is low, gross, and vulgar, and it is erroneously used as a synonym for personal influence by people who do not know the proper scientific meaning of magnetism. Those who claim to have a vast stock of 'magnetism' are like those who talk much of their bravery, sensible people find them devoid of either."

◆

MASSAGE AS PRACTICED BY BARBARIANS.

The same article of Dr. Graham contains a quotation from Mr. Charles Nordhoff's book on the Sandwich Islands, describing a practice which he found prevalent among the natives under the name "lomi-lomi." It is curious as being identical with massage as now practiced in civilized countries, and Mr. Nordhoff does not seem to have observed the parallel. Writing in 1873, he says: —

"Wherever you stop for lunch or for the night, if there are native people near, you will be greatly refreshed by the application of what they call 'lomi-lomi.' Almost everywhere you will find some one skillful in this peculiar, and, to tired muscles, delightful and refreshing treatment.

"To be lomi-lomied, you lie down on a mat, loosening your clothing or undressing for the night if you prefer. The less clothing you have on the more perfectly the operation can be performed. To you thereupon comes a stout native with soft fleshy hands but a strong grip, and beginning with your head and working down slowly over the whole body, seizes and squeezes with a quite peculiar art every tired muscle, working and kneading with indefatigable patience until, in half an hour, whereas you were sore and weary and worn out, you find yourself fresh, all soreness and weariness absolutely and entirely removed, and mind and body soothed to a healthful and refreshing sleep.

"The lomi-lomi is used not only by the natives but among almost all the foreign residents; and not merely to procure relief from weariness consequent on over-exertion, but to cure headache, to relieve the aching of neuralgic or rheumatic pains, and by the luxurious as one of the pleasures of life. I have known it to relieve violent headache in a very short time. The old chiefs used to keep skillful lomi-lomi men and women in their retinues; and the late king, who was for some years too stout to take exercise, and was yet a gross feeder, had himself lomi-lomied after every meal as a means of helping his digestion.

"It is a device for relieving pain or weariness which seems to have no injurious reaction, and no drawback but one — it is said to fatten the subjects of it."

◆

PHTHISIS AS A SELF-LIMITED DISEASE.

PROF. AUSTIN FLINT presented a paper before the British Medical Association showing that in a certain proportion of cases of undoubted phthisis not only a cessation but a retrogression of the process occurred. He quotes figures already published, including all his recorded cases of that disease up to 1875, numbering six hundred and seventy. Of these, forty-four ended in recovery, and the details given are sufficient to establish both the correctness of the diagnosis and the undoubtedness of the recovery. Besides these, there were thirty-one cases where the disease ceased to progress, and remained stationary for at least several months and in many instances some years. He considers that in these cases the phthisical process had ended, but that its resultant lesions prevented perfect recovery.

He points out that a similar temporary limitation occurs in most of the fatal cases of phthisis, but does not explain whether these fresh invasions are due to successive broods of tubercle bacilli. Of course, until the cause of these successive exacerbations, and by consequence of the intermediate remissions can be learned, it will be impossible to succeed in controlling such effects by medication. As a matter of fact, the cases of arrest of the disease seem to have been determined almost altogether independently of the treatment. Of the forty-four that wholly recovered, twenty-three received no medicinal treatment whatever, further than to meet ocasional palliative or symptomatic indications.

Even improvements in climatic and hygienic surroundings cannot be claimed as causes for some of the recoveries, as the self-limitation occurred in individuals who made no change in their habits of life or in the conditions under which the disease had developed. In other cases such changes were made in the hygienic circumstances as in the opinion of Dr. Flint may have favored the recovery or non-progression, though they were inadequate to arrest the disease. An important practical point with regard to change of diagnosis which is sometimes made when such cases have recovered is put by the writer as follows: —

"In the cases ending favorably, which have been referred to as furnishing proof of a self-limited duration, the diagnostic symptoms and physical signs were so well marked, as to leave no room for doubt as to the existence of phthisis. From cases which have come under my observation, I have been led to believe that not very unfrequently phthisis ends by self-limitation without having advanced far enough for the diagnosis to be considered as positive. A patient has had for some time a slight cough, either dry or with a scanty expectoration; there has been some loss in weight, and the body heat is somewhat raised, with, perhaps, spitting of blood. These symptoms, taken in connection with the age of the patient, and, it may be, grounds for suspecting a congenital predisposition, point to a tuberculous affection. But examinations of the chest in such a case may fail to reveal distinct physical signs. Very likely the problem, as regards the physical diagnosis, is to determine whether at the summit of the chest on the right side there are abnormal signs, or only the normal points of disparity between the two sides. There may be found only a subcrepitant râle, or slight pleuritic rubbing, or an interrupted respiratory murmur at the summit on one side, without conclusive evidence of tuberculous solidification. Under these circumstances, the physician either commits his judgment to a diagnosis of incipient phthisis, or, as is more probable, he reserves an opinion for further developments. After a short time all the pulmonary and general symptoms disappear. Now, if incipient phthisis have been diagnosticated, the physician concludes that the diagnosis was erroneous. He feels obliged so to conclude, in consequence of the common belief that phthisis does not thus commence and end from self-limitation. But it is highly probable that the diagnosis was correct. Phthisis existed and ended in its incipiency. It would be proper enough to distinguish these as cases of abortive phthisis. If I mistake not, all medical observers of much experience will admit that the foregoing sketch represents a class of cases not extremely rare. That they are not very rare is a fair inference from the frequency with which the traces of an old abortive phthisical affection are found in bodies dead with other diseases than phthisis."

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 18, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,206,590	582	189	18.73	13.89	5.50	1.20	5.50
Philadelphia	846,984	328	99	21.34	6.71	.31	3.04	14.94
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	200	88	20.50	10.50	2.50	3.50	6.50
Boston	362,535	142	41	23.24	7.76	3.52	4.93	12.67
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	172	73	36.99	5.20	.58	—	17.34
Cincinnati	255,708	110	41	17.27	3.64	1.81	1.81	4.55
New Orleans	216,140	112	34	16.95	4.36	7.14	—	.89
District of Columbia	177,638	73	27	20.55	6.85	9.59	2.74	2.74
Pittsburg	156,381	70	28	31.41	14.29	1.43	11.42	9.99
Buffalo	155,137	59	18	20.33	3.39	—	3.39	16.94
Milwaukee	115,578	44	25	15.89	15.89	—	4.54	2.27
Providence	104,857	67	9	51.70	10.34	1.48	31.36	8.86
New Haven	62,882	16	6	12.50	12.50	—	6.25	—
Charleston	49,999	40	16	20.00	5.00	2.50	7.50	7.50
Nashville	43,461	22	6	31.78	—	18.16	—	—
Lowell	59,485	21	6	19.04	9.52	9.52	4.76	—
Worcester	58,295	16	5	6.25	18.75	6.25	—	—
Cambridge	52,740	15	6	33.33	13.33	—	—	33.33
Fall River	49,006	14	7	28.56	7.14	14.28	7.14	7.14
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	5	1	—	—	—	—	—
Springfield	33,340	10	2	20.00	—	—	—	—
Salem	27,598	10	1	—	—	—	—	—
New Bedford	26,875	9	4	22.22	33.33	—	11.11	—
Somerville	24,985	4	1	—	25.00	—	—	—
Holyoke	21,851	11	4	18.18	27.27	—	.91	—
Chelsea	21,785	9	3	33.33	—	—	—	22.22
Taunton	21,213	—	—	—	—	—	—	—
Gloucester	19,329	3	1	—	—	—	—	—
Haverhill	18,475	7	2	57.12	14.28	14.28	28.56	14.28
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	5	2	80.00	—	—	—	80.00
Newburyport	13,537	5	3	40.00	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	5	2	—	—	—	—	—
Fourteen Massachusetts towns	114,580	35	10	17.14	8.57	2.85	2.85	11.43

Deaths reported 2221 (no reports from Brooklyn and St. Louis): under five years of age 760: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 503, consumption 316, lung diseases 225, diphtheria and croup 194, typhoid fever 86, diarrhœal diseases 77, small-pox 41, scarlet fever 35, malarial fevers 31, whooping-cough 12, erysipelas eight, cerebro-spinal meningitis eight, puerperal fever six, measles five. From *small-pox*, Baltimore 28, Philadelphia five, Chicago and Pittsburg three each, New York and New Orleans one each. From *scarlet fever*, New York 10, Cincinnati nine, Chicago seven, Philadelphia, Baltimore, and District of Columbia two each, Milwaukee, New Haven, and Chelsea one each. From *malarial fevers*, New York 13, New Orleans nine, Nashville three, Baltimore two, Philadelphia, District of Columbia, Charleston, and Springfield one each. From *whooping-cough*, New York seven, Boston and Pittsburg two each, Chicago one. From *erysipelas*, New York and Chicago two each, Philadelphia, Cincinnati, District of Columbia, and Springfield one each. From *cerebro-spinal meningitis*, New York and Milwaukee two each, Pittsburg, New Bedford, and Newburyport one each. From *puerperal fever*, Chicago two, New York, Boston, Lowell and Newburyport one each. From *measles*, New York two, Philadelphia, Chicago, and Baltimore one each.

One hundred and twenty-four cases of small-pox were reported in Baltimore, Pittsburg nine, Cincinnati three; diphtheria 32, scarlet fever 29, typhoid fever 24, in Boston; scarlet fever 18 and diphtheria 10, in Milwaukee.

In 30 cities and towns of Massachusetts, with a population of 964,717 (population of the State 1,783,086), the total death-rate for the week was 17.48 against 19.42 and 20.00, for the previous two weeks.

For the week ending October 28th, in 171 German cities and towns, with an estimated population of 8,530,061, the death-rate was 22.4. Deaths reported 3679: under five years of age 1305; consumption 507, lung diseases 331, diphtheria and croup 203, diarrhœal diseases 166, scarlet fever 93, typhoid fever 79, whooping-cough 67, measles and rötheln 56, puerperal fever 22, small-pox (Magdeburg one, Frankfort a. O. two) three. The death-rates ranged from 14.1 in Darmstadt to 39.4 in Posen; Königsberg 25.5; Breslau 28.3; Munich 24 5; Dresden 21; Berlin 23.2; Leipzig 20.3; Hamburg 19.3; Cologne 19.8; Frankfort a. M. 21.2; Strasburg 23.4.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending November 4th, the death-rate was 21.3. Deaths reported 3451: acute diseases of the respiratory organs (London) 347, scarlet fever 116, measles 97, diarrhœa 93, fever 84, whooping-cough 70, diphtheria 21, small-pox (Manchester and Newcastle one each) two. The death-rates ranged from 15.2 in Brighton to 33.1 in Preston; Newcastle-on-Tyne 17.3: Birmingham 18; Wolverhampton 19; London 20.1; Bradford 22.2; Manchester 23.8; Portsmouth 24.1; Derby 26.2; Liverpool 29.5. In Edinburgh 22.7; Glasgow 26.3; Dublin 20.4.

For the week ending November 4th, in the Swiss towns, population 494,390, there were 28 deaths from consumption, diarrhœal diseases 19, typhoid fever 12, diphtheria and croup 11, lung diseases five, whooping-cough four, erysipelas three, puerperal fever two. The death-rates were, in Geneva 15.5; Zurich 12.2; Basle 16.3; Berne 16.1.

The meteorological record for the week ending November 18th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
November, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 12	29.942	60	65	51	86	68	81	78	SW	SW	SW	16	7	7	O	O	C	—	—
Mon., 13	29.775	54	64	43	81	73	93	82	SW	S	W	6	15	14	O	O	R	—	—
Tues., 14	29.876	39	45	35	71	43	61	58	W	W	W	8	16	7	C	C	C	—	—
Wed., 15	30.036	38	50	30	73	47	71	64	W	W	W	7	10	8	C	C	C	—	—
Thurs., 16	30.266	42	52	33	69	46	65	60	W	W	NW	9	6	4	C	F	C	—	—
Fri., 17	30.288	32	42	29	90	96	100	95	NW	N	N	8	10	15	Snow	Snow	Snow	—	—
Sat., 18	30.232	27	33	24	88	62	88	79	N	N	NW	18	13	14	Snow	C	C	—	—
Means, the week.	30.059	45						74										33.00	0.36

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OBITUARY. WILLIAM H. BROWN, M. D.

Hon. William H. Brown, M. D., of Bangor, Me., one of the most prominent citizens and physicians, and Mayor of Bangor in 1879 and 1880, died, November 23d, after a lingering illness, caused by the failure of the digestive organs. He was born in Bangor, June 14, 1822, and graduated at Bowdoin in 1842 and Harvard Medical School in 1850, and had been president of the Penobscot District Medical Society. He was a grandson of George W. Brown and William Hammond, among the earliest settlers of Bangor. He was the only native of the city ever chosen mayor, and his reëlection in 1880 was nearly unanimous. It may be remembered that while Dr. Brown was Mayor of Bangor, during the political disturbances of that time in connection with the gubernatorial election, his personal influence did much towards keeping peace in that city. By reason and argument alone he induced an officer and troops, in the act of transporting arms from the armory at Bangor, to redeposit them and quietly leave the place. He was of ripe culture, fine abilities, and highly esteemed in the profession and by the community. He leaves a widow and two daughters.

Suffolk District Medical Society. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place on the second Wednesday of each month, namely, December 13th, January 10th, February 14th, March 14th, April 11th, May 9th, at 7.45 o'clock. Members of the Society who are not already enrolled in the membership of this Section can receive notice of the meetings by notifying the secretary. All members of the Society are cordially invited to attend these meetings and take part in the proceedings. Any member wishing to present a communication to the Section should inform the secretary at an early date. The exhibition of anatomical and pathological specimens is particularly desired. Any change of address of members, or failure to receive the notices, should be at once communicated to the secretary.

Albert N. Blodgett, 86 Boylston Street, *Secretary.*

Boston Society for Medical Observation. — A regular meeting of the Society will be held on Monday, December 4, 1882, at the Medical Library, at eight o'clock p. m. Reader, Dr. Charles H. Williams. Subject, Treatment of Diseases of the Lachrymal Canal. Dr. O. F. Wadsworth will open the discussion.

C. M. Jones, *Secretary.*

Gynæcological Society of Boston. — The next regular meeting will be held at the Medical Library Rooms, on the first Thursday of December, at eleven o'clock a. m. Dr. J. Collins Warren has kindly consented to present to the Society his method of Treatment of Rupture of the Perinæum. A paper is also expected from Dr. Norris. The profession are cordially invited.

Henry M. Field, M. D., *Secretary.*

Philadelphia County Medical Society Lectures. — Prof. Austin Flint, Senior, of New York, gives three lectures on The Physical Exploration of the Lungs by means of Auscultation and Percussion, in the hall of the Society, N. E. Cor. Thirteenth and Locust Streets, on Saturday, November 25th, December 16th, and January 13th, at eight p. m.

Lecture I. The True Mode of Study and its Requirements as regards Auscultation and Percussion. The Signs obtained by Percussion.

Lecture II. Auscultation; and the Respiratory Murmur, with its Abnormal Modifications.

Lecture III. The Râles and the Vocal Signs.

John B. Roberts, *Chairman Committee on Lectures.*

New York Orthopædic Dispensary and Hospital, No. 126 East 59th Street, N. Y. — The trustees of the New York Orthopædic Dispensary and Hospital announce that Dr. Newton M. Shaffer will give a course of Clinical Lectures on Orthopædic Surgery, at the institution on Thursday Afternoons, at half-past four o'clock, from November 16, 1882, to February 15, 1883, inclusive. The course will be free to the medical profession and students.

James T. Leavitt,
Chairman Committee on Clinical Instruction.

Original Articles.

FAREWELL ADDRESS OF DR. OLIVER WENDELL HOLMES TO THE MEDICAL SCHOOL OF HARVARD UNIVERSITY, TUESDAY, NOVEMBER 28, 1882.

I HAD intended that the recitation of Friday last should be followed by a few parting words to my class and any friends who might happen to be in the lecture-room. But I learned on the preceding evening that there was an expectation, a desire, that my farewell should take a somewhat different form; and not to disappoint the wishes of those whom I was anxious to gratify, I made up my mind to appear before you with such hasty preparation as the scanty time admitted.

There are three occasions upon which a human being has a right to consider himself as a centre of interest to those about him: when he is christened, when he is married, and when he is buried. Every one is the chief personage, the hero, of his own baptism, his own wedding, and his own funeral.

There are other occasions, less momentous, in which one may make more of himself than under ordinary circumstances he would think it proper to do; when he may talk about himself, and tell his own experiences, in fact, indulge in a more or less egoistic monologue without fear or reproach.

I think I may claim that this is one of those occasions. I have delivered my last anatomical lecture and heard my class recite for the last time. They wish to hear from me again in a less scholastic mood than that in which they have known me. Will you not indulge me in telling you something of my own story?

This is the thirty-sixth Course of Lectures in which I have taken my place and performed my duties as Professor of Anatomy. For more than half of my term of office I gave instruction in Physiology, after the fashion of my predecessors and in the manner then generally prevalent in our schools, where the physiological laboratory was not a necessary part of the apparatus of instruction. It was with my hearty approval that the teaching of Physiology was constituted a separate department and made an independent Professorship. Before my time, Dr. Warren had taught Anatomy, Physiology, and Surgery in the same course of Lectures, lasting only three or four months. As the boundaries of science are enlarged, new divisions and subdivisions of its territories become necessary. In the place of six Professors in 1847, when I first became a member of the Faculty, I count twelve upon the Catalogue before me, and I find the whole number engaged in the work of instruction in the Medical School amounts to no less than fifty.

Since I began teaching in this school, the aspect of many branches of science has undergone a very remarkable transformation. Chemistry and Physiology are no longer what they were, as taught by the instructors of that time. We are looking forward to the synthesis of new organic compounds; our artificial madder is already in the market, and the indigo-raisers are now fearing that their crop will be supplanted by the manufactured article. In the living body we talk of fuel supplied and work done, in movement, in heat, just as if we were dealing with a machine of our own contrivance. A physiological laboratory of to day is equipped with instruments of research of such ingenious contrivance, such elaborate construction, that one might suppose himself in a workshop where some exquisite fabric was to be wrought, such as Queens love to wear, and Kings do not always love to pay for. They are, indeed, weaving a charmed web, for these are the looms from which comes the knowledge that clothes the nakedness of the intellect. Here are the mills that grind food for its hunger, and "is not the life more than meat, and the body than raiment?"

But while many of the sciences have so changed that the teachers of the past would hardly know them, it has not been so with the branch I teach, or, rather, with that division of it which is chiefly taught in this amphitheatre. *General* anatomy, or histology, on the other hand, is almost all new; it has grown up, mainly, since I began my medical studies. I never saw a compound microscope during my years of study in Paris. Individuals had begun to use the instrument, but I never heard it alluded to by either Professors or students. In *descriptive* anatomy I have found little to unlearn, and not a great deal that was both new and important to learn. Trifling additions are made from year to year, not to be despised and not to be overvalued. Some of the older anatomical works are still admirable, some of the newer ones very much the contrary. I have had recent anatomical plates brought me for inspection, and I have actually button-holed the book-agent, a being commonly as hard to get rid of as the tar-baby in the negro legend, that I might put him to shame with the imperial illustrations of the bones and muscles in the great folio of Albinus, published in 1747, and the unapproached figures of the lymphatic system of Mascagni, now within a very few years of a century old, and still copied, or, rather, pretended to be copied, in the most recent works on anatomy.

I am afraid that it is a good plan to get rid of old Professors, and I am thankful to hear that there is a movement for making provision for those who are left in need when they lose their offices and their salaries. I remember one of our ancient Cambridge Doctors once asked me to get into his rickety chaise, and said to me, half humorously, half sadly, that he was like an old horse, — they had taken off his saddle and turned him out to pasture. I fear the grass was pretty short where that old servant of the public found himself grazing. If I myself needed an apology for holding my office so long, I should find it in the fact that human anatomy is much the same study that it was in the days of Vesalius and Fallopius, and that the greater part of my teaching was of such a nature that it could never become antiquated.

Let me begin with my first experience as a medical student. I had come from the lessons of Judge Story and Mr. Ashmun in the Law School at Cambridge. I had been busy, more or less, with the pages of Blackstone and Chitty, and other text-books of the first year of legal study. More or less, I say, but I am afraid it was less rather than more. For during that year I first tasted the intoxicating pleasure of authorship. A college periodical, conducted by friends of mine, still undergraduates, tempted me into print, and there is no form of lead-poisoning which more rapidly and thoroughly pervades the blood and bones and marrow than that which reaches the young author through mental contact with type-metal. *Qui a bu, boira,* — he who has once been a drinker will drink again, says the French proverb. So the man or woman who has tasted type is sure to return to his old indulgence sooner or later. In that fatal year I had my first attack of authors' lead-poisoning, and I have never got quite rid of it from that day to this. But for that I might have applied myself more diligently to my legal studies, and carried a green bag in place of a stethoscope and a thermometer up to the present day.

What decided me to give up Law and apply myself to Medicine I can hardly say, but I had from the first looked upon that year's study as an experiment. At any rate I made the change, and soon found myself introduced to new scenes and new companionships.

I can scarcely credit my memory when I recall the first impressions produced upon me by sights afterwards become so familiar that they could no more disturb a pulse-beat than the commonest of every-day experiences. The skeleton, hung aloft like a gibbeted criminal, looked grimly at me as I entered the room devoted to the students of the school I had joined, just as the fleshless figure of Time with the hour-glass and scythe, used to glare upon me in my childhood from the New England Primer. The white faces in the beds at the Hospital found their reflection in my own cheeks, which lost their color as I looked upon them. All this had to pass away in a little time; I had chosen my profession, and must meet its painful and repulsive aspects until they lost their power over my sensibilities.

The private medical school which I had joined was one established by Dr. James Jackson, Dr. Walter Channing, Dr. John Ware, Dr. Winslow Lewis, and Dr. George W. Otis. Of the first three gentlemen I have either spoken elsewhere or may find occasion to speak hereafter. The two younger members of this association of teachers were both graduates of our University, one of the year 1819, the other of 1818.

Dr. Lewis was a great favorite with students. He was a man of very lively temperament, fond of old books and young people, open-hearted, free-spoken, an enthusiast in teaching, and especially at home in that apartment of the temple of science where nature is seen in undress, the anthropotomic laboratory, known to common speech as the dissecting-room. He had that quality which is the special gift of the man born for a teacher, — the power of exciting an interest in that which he taught. While he was present the apartment I speak of was the sunniest of studios in spite of its mortuary spectacles. Of the students I met there I best remember James Jackson, Junior, full of zeal and playful as a boy, a young man whose early death was a calamity to the profession of which he promised to be a chief ornament; the late Reverend J. S. C. Greene, who, as the prefix to his name signifies, afterwards changed his profession, but one of whose dissections I remember looking upon with admiration; and my friend *Mr.* Charles Amory, as we call him, *Dr.* Charles Amory, as he is entitled to be called, then, as now and always, a favorite with all about him. He had come to us from the schools of Germany, and brought with him recollections of the teachings of Blumenbach and the elder Langenbeck, father of him whose portrait hangs in our Museum. Dr. Lewis was our companion as well as our teacher. A good demonstrator is, — I will not say as important as a good Professor in the teaching of Anatomy, because I am not sure that he is not more important. He comes into direct personal relations with the students, — he is one of them, in fact, as the Professor cannot be from the nature of his duties. The Professor's chair is an insulating stool, so to speak; his age, his knowledge, real or supposed, his official station, are like the glass legs which support the electrician's piece of furniture, and cut it off from the common currents of the floor upon which it stands. Dr. Lewis enjoyed teaching and made his students enjoy being taught. He delighted in those anatomical conundrums to answer which keeps the student's eyes open and his wits awake. He was happy as he dexterously performed the *tour de maître* of the old barber-surgeons, or applied the spica bandage and taught his scholars to do it, so neatly and symmetrically that the æsthetic missionary from the older centre of civilization would bend over it in blissful contemplation, as if it were a sunflower. Dr. Lewis had many other tastes, and was a favorite, not only with students, but in a wide circle, professional, antiquarian, masonic, and social.

Dr. Otis was less widely known, but was a fluent and agreeable lecturer, and esteemed as a good surgeon.

I must content myself with this glimpse at myself and a few of my fellow-students in Boston. After attending two courses of Lectures in the school of the University, I went to Europe to continue my studies.

You may like to hear something of the famous Professors of Paris in the days when I was a student in the École de Médecine, and following the great Hospital teachers.

I can hardly believe my own memory when I recall the old practitioners and Professors who were still going round the hospitals when I mingled with the train of students that attended the morning visits. See that bent old man who is groping his way through the wards of La Charité. That is the famous Baron Boyer, author of the great work on surgery in nine volumes, a writer whose clearness of style commends his treatise to general admiration, and makes it a kind of classic. He slashes away at a terrible rate, they say, when he gets hold of the subject of fistula in its most frequent habitat, — but I never saw him do more than look as if he wanted to cut a good collop out of a patient he was examining. The short, square, substantial man with iron-gray hair, red face, and white apron is Baron Larrey, Napoleon's favorite surgeon, the most honest man he ever saw, — it is reputed that he called him. To go round the Hotel des Invalides with Larrey was to live over the campaigns of Napoleon, to look on the sun of Austerlitz, to hear the cannons of Marengo, to struggle through the icy waters of the Beresina, to shiver in the snows of the Russian retreat, and to gaze through the battle smoke upon the last charge of the red lancers on the redder field of Waterloo. Larrey was still strong and sturdy as I saw him, and few portraits remain printed in livelier colors on the tablet of my memory.

Leave the little group of students which gathers about Larrey beneath the gilded dome of the Invalides and follow me to the Hotel Dieu, where rules and reigns the master-surgeon of his day, at least so far as Paris and France are concerned, — the illustrious Baron Dupuytren. No man disputed his reign, — some envied his supremacy. Lisfranc shrugged his shoulders as he spoke of "ce grand homme de l'autre coté de la rivière," that great man on the other side of the river, but the great man he remained, until he bowed before the mandate which none may disobey. "Three times," said Bouillaud, "did the apoplectic thunderbolt fall on that robust brain," — it yielded at last as the old bald cliff that is riven and crashes down into the valley. I saw him before the first thunderbolt had descended. A square, solid man, with a high and full-domed head, oracular in his utterances, indifferent to those around him, sometimes, it was said, very rough with them. He spoke in low, even tones, with quiet fluency, and was listened to with that hush of rapt attention which I have hardly seen in any circle of listeners unless when such men as ex-President John Quincy Adams or Daniel Webster were the speakers. I do not think that Dupuytren has left a record which explains his influence, but in point of fact he dominated those around him in a remarkable manner. You must have all witnessed something of the same kind. The personal presence of some men carries command with it, and their accents silence the crowd around them, when the same words from other lips might fall comparatively unheeded.

As for Lisfranc, I can say little more of him than that he was a great drawer of blood and hewer of members. I remember his ordering a wholesale bleeding of his patients, right and left, whatever might be the matter with them, one morning when a phlebotomizing fit was on him. I recollect his regretting the splendid guardsmen of the old Empire, — for what? because they had such magnificent thighs to amputate. I got along about as far as that with him, when I ceased to be a follower of M. Lisfranc.

The name of Velpeau must have reached many of you, for he died in 1867, and his many works made his name widely known. Coming to Paris in wooden shoes, starving, almost, at first, he raised himself to great eminence as a surgeon and as an author, and at last obtained the Professorship to which his talents and learning entitled him. His example may be an encouragement to some of my younger hearers who are born, not with the silver spoon in their mouths, but with the two-tined iron fork in their hands. It is a poor thing to take up their milk porridge with in their young days, but in after years it will often transfix the solid dumplings that roll out of the silver spoon. So Velpeau found it. He had not what is called genius, he was far from prepossessing in aspect, looking as if he might have wielded the sledge-hammer (as I think he had done in early life) rather than the lancet, but he had industry, determination, intelligence, character, and he made his way to distinction and prosperity, as some of you sitting on these benches and wondering anxiously what is to become of you in the struggle for life will have done before the twentieth century has got halfway through its first quarter. A good sound head over a pair of wooden shoes is a great deal better than a wooden head belonging to an owner who cases his feet in calfskin, but a good brain is not enough without a stout heart to fill the four great conduits which carry at once fuel and fire to that mightiest of engines.

How many of you who are before me are familiarly acquainted with the name of Broussais, or even with that of Andral? Both were lecturing at the École de Médecine, and I often heard them. Broussais was in those days like an old volcano, which has pretty nearly used up its fire and brimstone, but is still boiling and bubbling in its interior, and now and then sends up a spirt of lava and a volley of pebbles. His theories of gastro-enteritis, of irritation and inflammation as the cause of disease, and the practice which sprang from them, ran over the fields of medicine for a time like flame over the grass of the prairies. The way in which that knotty-featured, savage old man would bring out the word irritation, — with rattling and rolling reduplication of the resonant letter *r* — might have taught a lesson in articulation to Salvini. But Broussais's theory was languishing and well-nigh become obsolete, and this, no doubt, added vehemence to his defence of his cherished dogmas.

Old theories, and old men who cling to them, must take themselves out of the way as the new generation with its fresh thoughts and altered habits of mind comes forward to take the place of that which is dying out. This was a truth which the fiery old theorist found it very hard to learn, and harder to bear, as it was forced upon him. For the hour of his lecture was succeeded by that of a younger and far more popular professor. As his lecture drew towards its close, the benches, thinly sprinkled with students, began to fill up; the doors creaked open and banged back oftener and oftener, until at last the sound became almost continuous, and the voice of the lecturer became a leonine growl as he strove in vain to be heard over the noise of doors and footsteps.

Broussais was now sixty-two years old. The new generation had outgrown his doctrines, and the Professor for whose hour the benches had filled themselves belonged to that new generation. Gabriel Andral was little more than half the age of Broussais, in the full prime and vigor of manhood at thirty-seven years. He was a rapid, fluent, fervid, and imaginative speaker, pleasing in aspect and manner, — a strong contrast to the harsh, vituperative old man who had just preceded him. His Clinique Médicale is still valuable as a collection of cases, and his researches on the blood, conducted in association with Gavarret, contributed new and valuable facts to science. But I remember him chiefly as one of those instructors whose natural eloquence made it delightful to listen to him. I doubt if I or my fellow-students did full justice either to him or to the famous physician of Hôtel Dieu, Chomel. We had addicted ourselves almost too closely to the words of another master, by whom we were ready to swear as against all teachers that ever were or ever would be.

This object of our reverence, I might almost say idolatry, was one whose name is well known to most of the young men before me, even to those who may know comparatively little of his works and teachings. Pierre Charles Alexandre Louis, at the age of forty-seven, as I recall him, was a tall, rather spare, dignified personage, of serene and grave aspect, but with a pleasant smile and kindly voice for the student with whom he came into personal relations. If I summed up the lessons of Louis in two expressions, they would be these; I do not hold him answerable for the words, but I will condense them after my own fashion in French, and then give them to you, expanded somewhat, in English: —

> Formez toujours *des idées nettes.*
> Fuyez toujours *les à peu près.*

Always make sure that you form a distinct and clear idea of the matter you are considering.

Always avoid vague approximations where exact estimates are possible; *about so many,* — *about so much,* instead of the precise number and quantity.

Now, if there is anything on which the biological sciences have prided themselves in these latter years it is the substitution of quantitative for qualitative formulæ. The "numerical system," of which Louis was the great advocate, if not the absolute originator, was an attempt to substitute series of carefully recorded facts, rigidly counted and closely compared, for those never-ending records of vague, unverifiable conclusions with which the classics of the healing art were overloaded. The history of practical medicine had been like the story of the Danaides. "Experience" had been, from time immemorial, pouring its flowing treasures into buckets full of holes. At the existing rate of supply and leakage they would never be filled; nothing would ever be settled in medicine. But cases thoroughly recorded and mathematically analyzed would always be available for future use, and when accumulated in sufficient number would lead to results which would be trustworthy, and belong to science.

You young men who are following the hospitals hardly know how much you are indebted to Louis. I say nothing of his Researches on Phthisis or his great work on Typhoid Fever. But I consider his modest and brief Essay on Bleeding in some Inflammatory Diseases, based on cases carefully observed and numerically analyzed, one of the most important written contributions to practical medicine, to the treatment of internal disease, of this century, if not since the days of Sydenham. The lancet was the magician's wand of the dark ages of medicine. The old physicians not only believed in its general efficacy as a wonder-worker in disease, but they believed that each malady could be successfully attacked from some special part of the body, — the strategic point which commanded the seat of the morbid affection. On a figure given in the curious old work of John de Ketam, no less than *thirty-eight* separate places are marked as the proper ones to bleed in, in different diseases. Even Louis, who had not wholly given up venesection, used now and then to order that a patient suffering from headache should be bled in the foot, in preference to any other part.

But what Louis did was this: he showed by a strict analysis of numerous cases that bleeding did not strangle, —*jugulate* was the word then used, — acute diseases, more especially pneumonia. This was not a reform, — it was a revolution. It was followed up in this country by the remarkable Discourse of Dr. Jacob Bigelow upon Self-Limited Diseases, which has, I believe, done more than any other work or essay in our own language to rescue the practice of medicine from the slavery to the drugging system which was a part of the inheritance of the profession.

Yes, I say, as I look back on the long hours of the many days I spent in the wards and in the autopsy room of La Pitié, where Louis was one of the attending physicians, — yes, Louis did a great work for practical medicine. Modest in the presence of nature, fearless in the face of authority, unwearying in the pursuit of truth, he was a man whom any student might be happy and proud to claim as his teacher and his friend. And yet, as I look back on the days when I followed his teachings, I feel that I gave myself up too exclusively to his methods of thought and study.

There is one part of their business that certain medical practitioners are too apt to forget; namely, that what they should most of all try to do is to ward off disease, to alleviate suffering, to preserve life, or at least to prolong it if possible. It is not of the slightest interest to the patient to know whether three or three and a quarter cubic inches of his lung are hepatized. His mind is not occupied with thinking of the curious problems which are to be solved by his own autopsy, — whether this or that strand of the spinal marrow is the seat of this or that form of degeneration. He wants something to relieve his pain, to mitigate the anguish of dyspnœa, to bring back motion and sensibility to the dead limb, to still the tortures of neuralgia. What is it to him that you can localize and name by some uncouth term the disease which you could not prevent and which you cannot cure? An old woman who knows how to make a poultice and how to put it on, and does it *tuto, cito, jucunde*, just when and where it is wanted, is better — a thousand times better in many cases — than a staring pathologist, who explores and thumps and doubts and guesses and tells his patient he will be better to-morrow, and so goes home to tumble his books over and make out a diagnosis.

But in those days I, like most of my fellow students, was thinking much more of "science" than of practical medicine, and I believe if we had not clung so closely to the skirts of Louis and had followed some of the courses of men like Trousseau, — therapeutists, who gave special attention to curative methods, and not chiefly to diagnosis, it would have been better for me and others. One thing, at any rate, we did learn in the wards of Louis. We learned that a very large proportion of diseases get well of themselves, without any special medication, — the great fact formulated, enforced and popularized by Dr. Jacob Bigelow in the Discourse referred to. We *un*learned the habit of drugging for its own sake. This detestable practice, which I was almost proscribed for condemning somewhat too epigrammatically a little more than twenty years ago, came to us, I suspect, in a considerable measure from the English "general practitioners," a sort of prescribing apothecaries. You remember how, when the city was besieged, each artisan who was called upon in council to suggest the best means of defence, recommended the articles he dealt in: the carpenter, wood; the blacksmith, iron; the mason, brick; until it came to be a puzzle to know which to adopt.

> "*Then the shoemaker said, Hang your walls with new boots,*"

and gave good reasons why these should be the best of all possible defences. Now the "general practitioner" charged, as I understand, for his medicine, and in that way got paid for his visit. Wherever this is the practice, medicine is sure to become a trade, and the people learn to expect drugging, and to consider it necessary, because drugs are so universally given to the patients of the man who gets his living by them.

It was something to have unlearned the pernicious habit of constantly giving poisons to a patient, as if they were good in themselves, of drawing off the blood which he would want in his struggle with disease, of making him sore and wretched with needless blisters, of turning his stomach with unnecessary nauseous draughts and mixtures, — only because he was sick and something must be done. But there were positive as well as negative facts to be learned, and some of us, I fear, came home rich in the negatives of the expectant practice, poor in the resources which many a plain country practitioner had ready in abundance for the relief and the cure of disease. No one instructor can be expected to do all for a student which he requires. Louis taught us who followed him the love of truth, the habit of passionless listening to the teachings of nature, the most careful and searching methods of observation, and the sure means of getting at the results to be obtained from them in the constant employment of accurate tabulation. He was not a showy, or eloquent, or, I should say, a very generally popular man, though the favorite, almost the idol, of many students, especially Genevese and Bostonians. But he was a man of lofty and admirable scientific character, and his work will endure in its influences long after his name is lost sight of save to the faded eyes of the student of medical literature.

Many other names of men more or less famous in their day, and who were teaching while I was in Paris, come up before me. They are but empty sounds for the most part in the ears of the men of not more than middle age. Who of you knows anything of Richerand, author of a very popular work on Physiology, commonly put into the student's hand when I first began to ask for medical text-books? I heard him lecture once, and have had his image with me ever since as that of an old, worn-out man, — a venerable but dilapidated relic of an effete antiquity. To verify this impression I have just looked out the dates of his birth and death, and find that he was eighteen years younger than the speaker who is now addressing you. There is a terrible parallax between the period before thirty and that after threescore and ten, as two men of those ages look, one with naked eyes, one through his spectacles, at the man of fifty and thereabout. Magendie, I doubt not you have all heard of. I attended but one of his lectures. I question if one here, unless some contemporary of my own has strayed into the amphitheatre, — knows anything about Marjolin. I remember two things about his lectures on surgery, — the deep tones of his voice as he referred to his oracle, — the earlier writer, Jean Louis Petit, — and his formidable snuff box. What he taught me lies far down, I doubt not, among the roots of my knowledge, but it does not flower out in any noticeable blossoms, or offer me any very obvious fruits. Where now is the fame of Bouillaud, Professor and Deputy, the Sangrado of his time? Where is the renown of Piorry, percussionist and poet, expert alike in the resonances of the thoracic cavity and those of the rhyming vocabulary? I think life has not yet done with the vivacious Ricord, whom I remember calling the Voltaire of pelvic literature, — a sceptic as to the morality of the race in general, who would have submitted Diana to treatment with his mineral specifics, and ordered a course of blue pills for the vestal virgins.

Ricord was born at the beginning of the century and Piorry some years earlier. Cruveilhier, who died in 1874, is still remembered by his great work on pathological anatomy; his work on descriptive anatomy has some things which I look in vain for elsewhere. But where is Civiale, — where are Orfila, Gendrin, Rostan, Biett, Alibert, — jolly old Baron Alibert, whom I remember so well in his broad-brimmed hat, worn a little jauntily on one side, calling out to the students in the court-yard of the Hospital St. Louis, "Enfans de la méthode naturelle, êtes vous tous ici?" "Children of the natural method (his own method of classification of skin diseases), are you all here?" All here, then, perhaps; all *where*, now?

My show of ghosts is over. It is always the same story that old men tell to younger ones, some few of whom will in their turn repeat the tale, only with altered names, to their children's children.

Like phantoms painted on the magic slide,
Forth from the darkness of the past we glide,
As living shadows for a moment seen
In airy pageant on the eternal screen,
Traced by a ray from one unchanging flame,
Then seek the dust and stillness whence we came.

Dr. Benjamin Waterhouse, whom I well remember, came back from Leyden, where he had written his Latin graduating thesis, talking of the learned Gaubius and the late illustrious Boerhaave and other dead Dutchmen of whom you know as much, most of you, as you do of Noah's apothecary and the family physician of Methusaleh, whose prescriptions seem to have been lost to posterity. Dr. Lloyd came back to Boston full of the teachings of Cheselden and Sharpe, William Hunter, Smellie and Warner; Dr. James Jackson loved to tell of Mr. Cline and to talk of Mr. John Hunter; Dr. Reynolds would give you his recollections of Sir Astley Cooper and Mr. Abernethy; I have named the famous Frenchmen of my student days; Leyden, Edinburgh, London, Paris were each in turn the Mecca of medical students, just as at the present day Vienna and Berlin are the centres where our young men crowd for instruction. These also must sooner or later yield their precedence and pass the torch they hold to other hands. Where shall it next flame at the head of the long procession? Shall it find its old place on the shores of the Gulf of Salerno, or shall it mingle its rays with the northern aurora up among the fiords of Norway, — or shall it be borne across the Atlantic and reach the banks of the Charles, where Agassiz and Wyman have taught, where Hagen still teaches, glowing like his own Lampyris splendidula, with enthusiasm, where the first of American botanists and the ablest of American surgeons are still counted in the roll of honor of our great University?

Let me add a few words which shall not be other than cheerful, as I bid farewell to this edifice which I have known so long. I am grateful to the roof which has sheltered me, to the floors which have sustained me, though I have thought it safest always to abstain from anything like eloquence, lest a burst of too emphatic applause might land my class and myself in the cellar of the collapsing structure, and bury us in the fate of Korah, Dathan, and Abiram. I have helped to wear these stairs into hollows, — stairs which I trod when they were smooth and level, fresh from the plane. There are just thirty-two of them, as there were five and thirty years ago, but they are steeper and harder to climb, it seems to me, than they were then. I remember that in the early youth of this building, the late Dr. John K. Mitchell, father of our famous Dr. Weir Mitchell, said to me as we came out of the Demonstrator's room, that some day or other a whole class would go heels over head down this graded precipice, like the herd told of in Scripture story. This has never happened as yet; I trust it never will. I have never been proud of the apartment beneath the seats, in which my preparations for lecture were made. But I chose it because I could have it to my myself, and I resign it, with a wish that it were more worthy of regret, into the hands of my successor, with my parting benediction. Within its twilight precincts I have often prayed for light, like Ajax, for the daylight found scanty entrance, and the gaslight never illuminated its dark recesses. May it prove to him who comes after me like the cave of the Sibyl, out of the gloomy depths of which came the oracles which shone with the rays of truth and wisdom!

This temple of learning is not surrounded by the mansions of the great and the wealthy. No stately avenues lead up to its façades and porticos. I have sometimes felt, when convoying a distinguished stranger through its precincts to its door, that he might question whether star-eyed Science had not missed her way when she found herself in this not too attractive locality. I cannot regret that we — you, I should say, — are soon to migrate to a more favored region and carry on your work as teachers and as learners in ampler halls and under far more favorable conditions.

I hope that I may have the privilege of meeting you there, possibly may be allowed to add my words of welcome to those of my former colleagues, and in that pleasing anticipation I bid good-by to this scene of my long labors, and, for the present at least, to the friends with whom I have been associated.

◆

PAINLESS SYNOVIAL EFFUSIONS.[1]

BY R. M. HODGES, M. D.

A SYNOVIAL effusion often takes place insidiously in the knees of women, less frequently in those of men, in consequence of what is called "a low state of health." It may be the immediate consequence of much standing or walking by persons thus conditioned; but, as a rule, it develops spontaneously, without any special cause. It may occur in both knees simultaneously, or successively, or but in one, and is usually fully established when attention is first directed to the state of the joint. It is accompanied, locally, by so slight, if any, pathological phenomena deserving the name of inflammatory, that it can scarcely be called synovitis. The familiar title "dropsy," or "water on the knee," adequately describes a state, the presence of which is a symptom, and a symptom only, — as œdema of the ankles, muscae volitantes, or a headache might be. It does not imply articular disease any more than the phenomena just mentioned imply kidney, eye, or brain disease.

It is no unusual experience to see patients with "water on the knee" maintain an unchanged condition for months, not to say years, although active treatment with iodine, blisters, or even actual cautery, has been reënforced by absolute rest and prolonged disuse of the joint. It is alleged, in all probability, that pain is at once caused whenever, even at long intervals, attempts at exercise or use are made; and this pain, the existence of which is accepted on the bare statement of the patient, has been assumed to be the requisition for still further confinement.

Every surgeon will also recall instances where these very patients have been rapidly cured by the douching and shampooing of a "bone-setter," the manipulations of some "Swedish movement" professor, or the simple command to walk of an inspired quack.

The truth is that an increase of synovial fluid, though it reaches a degree sufficient to produce the characteristic shape of the knee when an effusion bulges out on each side of the patella, and floats that bone away from its habitual contact with the condyles, — provided that, in the surgeon's opinion, and this is an important point, it is accompanied by no real or constant pain in the daytime, or an amount of heat recognizable by the touch, and does not ache at night; being uncomfortable only, or chiefly, from a feeling of distention, — is a state of things, under the conditions of debility described, not calling for any local treatment whatsoever. I have never seen, so far as my personal observation extends, the least advantage derived in such cases from iodine, vesication, counter-irritation, or liniments of any description.

Moreover, disuse is apt to be the worst remedy for these effusions which can be prescribed, and their long duration, examples of which are so often instanced by patients to justify their own apprehensions, frequently owes its actual occurrence to this very measure, adopted with a view to its intended prevention.

Many cases of really acute synovitis, the direct consequence of injury, and happening to persons in full health, are also often recovered from without treatment by restraint, the exigencies of a daily employment permitting little or no let-up in the use of the limb; and all this notwithstanding reiterated warnings as to the direful consequences of such imprudence, and in spite of earnest appeals from physician and friends to give the disabled joint a rest which it absolutely required.

Every observer of animals knows how often, with but little abatement of habitual activity, their sprains and lamenesses cure themselves. A very moderate amount of prudence, a "saving of oneself," not inconsistent with the transaction of ordinary affairs, will equally allow men and women to recover from an acute effusion without "giving up." Still more emphatically is this true of those individuals whose ominous "water on the knee," with or without concomitant non-inflammatory pains, is but one of the indications of impaired vigor; who instead of confining themselves to the house, and renouncing the use of their limbs, tend rather to disregard a too readily assumed disability for locomotion, and adopt measures intended to defeat the hysteric and hyperæsthetic predispositions that are almost inevitably an accompaniment of their condition. In other words, they should lead a life in which the hygienic influences of a quiet vocation, of out-door air, and of abundant food, shall be the prime factors of treatment.

It is a routine and common practice to recommend an elastic knee-cap in cases of effusion. This is rarely beneficial, even if the cap be worn tight enough to serve as a pseudo-splint, which I conceive to be almost its sole office. As ordinarily made it does not extend sufficiently above and below the joint; its contractile tendency shortens its already inadequate length, puckers it up, and gradually converts it into a comparatively narrow band around the articulation, which adds the discomfort of an œdema of the ankle and leg, provoked by its cord-like compression of the popliteal vessels.

A far better medium for securing the advantage of a soft and partial splint, which shall be a support to the limb, act as a check to too free use of the joint, and at the same time supply a moderate compression of the distended capsule, is found in a bandage of flannel cut "bias," that is, diagonally. The cheapest flannel should be employed. That it contains a large amount of cotton is no objection. This is not for economy's sake, but because all-wool flannel, of a good quality, is hot and clumsy, and felts and loses its elasticity when washed. The bandage should be cut at least five inches wide. It is worthless if of less than that width; for, as it lengthens itself about one third in application, a bandage narrower than five inches draws out into little more than a piece of tape. It must be applied with the limb straight, each turn overlapping two thirds of the previous one, and should extend from the middle of the leg to the upper third of the thigh. It is not likely to be put on too tightly, and as its elasticity permits "reversing" to be dispensed with, any patient can wind it round his limb himself. As an appliance it has the merit of being cheap and everywhere obtainable; it does not require the skill of an expert in its use; it is efficacious, and it is comfortable.

---

[1] Read before the Boston Society for Medical Improvement, November 27, 1882.

What I have thus far said, let me repeat distinctly, has reference only to effusions, unattended by heat of the parts, or by pain deserving of the name, and my object has been to declare the innocuity of a certain amount of exercise, and the uselessness, indeed the disadvantage of confinement under the supposed circumstances of their existence.

When the effusion, however, shows no tendency to abate, but increases to a degree which stretches the synovial capsule, and ligaments of the joint, endangering a permanent relaxation of these supports, — a state of things which takes place gradually, and is also often painless in its development, — the necessity for disuse of the limb, and for decided treatment, admits of no question. Mere immobility of the joint, secured by means of a surgical and workmanlike splint, applied with competent and qualified skill, may answer all the demands of the case. But an expedient, original with the Massachusetts General Hospital in its detail, though not in its principle, for twenty years used with advantage in that institution, and there known as the compressed sponge treatment, deserves more general notoriety than it has yet had.

By compression capillaries are emptied, the circulation in small vessels is checked, the vaso-motor nerves are deadened, the tissues are in a measure deprived of their nutriment, the parts become, as it were, dried, a degree of atrophy ensues, and the functional activity of secreting surfaces is impaired or arrested. The shrinking of a limb long bandaged or compressed by splints, as in the treatment of fracture, or on which an elastic knee cap has been worn, perhaps only a few days, always attracts the attention of patient and surgeon. The condition of a lung compressed by pleuritic effusion offers a striking illustration, post mortem, of the transformation produced by continuous pressure. The gradual destruction of bone by an aneurism is a familiar instance of its potency.

Pressure has long been resorted to and recognized as of great utility in the treatment of chronic synovial effusions, but the inadequacy of the means employed gave only imperfect results in return for its adoption. Ordinary bandages lose their hold too soon. Starched, dextrined, or silicated bandages do not follow up the shrinkage they may have started. India-rubber air or water bags are with difficulty held in place. Cotton batting beneath a bandage, though convenient and admirable in slight cases, does not afford sufficient compression. A "pure rubber" bandage, when applied tightly enough to be of service in this capacity, causes a degree of pain which renders it unendurable. Compressed sponge seems alone to supply all the desiderata.

Common, coarse, Mediterranean sponges, washed, and thoroughly dried by heat, as large or larger than the hand, and thick as they are broad, are compressed to the utmost limit which is possible in any powerful press, such as a letter-press, or between two boards screwed together. They should remain in the press twenty-four hours, and become reduced to a thickness, varying with the quality of the individual sponge, of one half to three quarters of an inch. The limb on which they are to be used being bandaged with a common cotton roller from the foot up, including the knee itself, so that any cutaneous irritation by the surface of the sponge may be prevented, a long and straight ham splint, lightly padded with towels, is adjusted. The compressed sponges, still in their dry state, are next applied around the knee. Three sponges usually suffice, one on each side, coming together below the joint, and a third covering the lower part of the thigh, transversely, above the patella, which they should leave uncovered. These are then firmly bound into place by a broad roller, also beginning at the ankle, and carried upward to the top of the thigh, many turns being taken over the sponges to secure them compactly in position. The bandaging completed, the sponges are then soaked with water, poured on gradually until they have absorbed so much that the pressure caused by their expansion begins to be uncomfortable. Two quarts of water are not unfrequently taken up. As this evaporates or oozes out more water is from time to time added, and fresh bandages are put on over those already in place if the latter become loose or slack. Occasionally there is pain enough provoked to call for an opiate at night, and the toes may swell, but the splint, which not only secures immobility but acts as a *point d'appui* for the bandage, takes off the direct compression from the popliteal vessels to such a degree that any anxiety in regard to arrest of circulation may be set aside.

Several successive sets of sponges are occasionally required before permanent disappearance of the effusion takes place, but their renewal is seldom called for in less than seven or eight days. The treatment compels rest in bed not only while the compression is kept up, but a sufficient length of time afterward for the joint to become gradually familiar with its habitual movements. An abrupt restoration to use after such a complete confinement is liable to bring back the effusion. The flannel bandage previously described should be worn when patients first walk about, and for a time afterwards.

The success with which this particular mode of treatment overcomes an obstinate and unyielding affection is my excuse for describing with such minuteness the manner of employing an expedient already familiar to many of this Society.

Before concluding this discursive paper, I am led, by the relationship of the acts of walking and standing to the ailment which has been under consideration, to express my opinion of the extent to which, unwittingly, these two agencies are the frequent cause of general debility and "nervous prostration," so called, and my belief that many persons leading an in-door life — mothers of families, school and shop-girls, domestics, professional and business men — aggravate the enervation and lassitude of which they so often complain by the "constitutional walk" that a sense of duty compels them to take at some period of each day Few realize how much exercise they submit to without knowing it, or reflect what an unjust share the legs endure of the muscular work which should be evenly distributed throughout the body. Experiment with the pedometer has informed me that from three to five miles are walked every day by most women who do no more than the usual amount of locomotion within doors. At one time it was almost impossible to find persons of sufficient physical vigor to preserve their health and remain pupils in the Training School for Nurses of the Massachusetts General Hospital. When it was learned, by pedometer test, that they walked between seven and ten miles a day, a change in their duties remedied the whole difficulty. The experiments made at this time showed that surgical house-pupils walked from eleven to twelve miles a day, the superintendent of the hospital fourteen miles, the head nurse of the private rooms sixteen miles (or the equivalent of 282.72 tons lifted one foot), while the ward-tender of the private rooms and wards A, C, and D, between six A. M. and eight P. M., walked twenty-two miles, or 51,627 steps of 27 inches (2346⅔ steps to a mile). These figures include no outside walking (except one and a half mile in the case of the ward-tender), and are average and not exceptional results.

Hygienic requirements claim from most persons more exercise of the trunk muscles than is habitually given them, and less of those belonging to the lower extremities. Patients to whom exercise is recommended, and who do not obtain the benefit which it might be supposed would follow a daily walk, often find what they stand in need of when an hour of gymnastics is made the substitute, or, in other words, from the exercise of muscles which, to use an inelegant expression, have been left out in the cold, while those of the legs were given more than they could do.

The inference from these facts and from others which might be mentioned is that many people, not robust, are frequently over-walked, and yet, perhaps, suffer from want of exercise, over-doing in one set of muscles the very thing they actually need in another. Debilitated by such an unequal demand on their physical resources, flat-foot, tarsalgia, maladie des sergens de ville, and "water on the knee," as well as anæmic, dyspeptic, and neurotic ailments, are developed as local and general manifestations of the exhaustion occasioned by prolonged standing and too much walking, especially when aided and abetted by an insufficiency of fresh air. Recognition of these facts has already given expression, on both sides of the Atlantic, to a sympathetic and organized effort for the alleviation of one class of sufferers, the saleswomen in retail stores.

Physicians often say, in a professional and perfunctory tone, that "health is all-important," and that to maintain health daily exercise is an absolute requirement. Dr. B. W. Richardson (the well-known author of the City of Hygeia), in a recent lecture to ladies (May, 1882), declared it essential, as a matter of principle, that eight hours a day should be devoted to exercise, care being taken to avoid "monotony of movement." But the eminent lecturer gave no information when or how these eight hours were to be found by any other class of women than those, perhaps, who frequent lectures on sanitary reform.

The capacity of either sex for physical exercise varies with each individual, just as steam engines do in their horse power, and this variation casts no reflection on the quality of the person any more than it does on that of the machine. There are all kinds of health; and the health to row victoriously in a race is not of the kind which is wanted when the business is to sit healthily in a chair, or to withstand the wear and tear of domestic and household cares.

To recommend walking to men and women indiscriminately, and irrespective of their mode of life, cannot but be a mistake, and yet the universal instinct which revolts at close confinement within doors, in ill-ventilated and over-heated rooms, must be respected.

How "monotony of movement," which Dr. Richardson warns them against, is to be avoided by people, particularly females, whose busy lives are spent in houses, shops, and workrooms, who are unconsciously on their feet to the extent which has been shown, and yet provide them with the exhilarating refreshment, the change of scene and beneficent influences of outdoor air, *without* the only exercise by which, for the greater part of the community, these can be obtained, is a problem not easily solved, and until it is much of the debility and nervous exhaustion, now prevalent in all grades of society, and which reveal themselves by so many eccentric and out-of-the-way indications, is likely to remain in a great degree unrelieved.

THE TREATMENT OF A FORM OF PAINFUL PERIARTHRITIS OF THE SHOULDER.[1]

BY JAMES J. PUTNAM, M. D.

As another instance of treatment which was protracted, and yet not successful, I will mention a case operated upon by Dr. Curtis at the Massachusetts General Hospital. I regard this observation as particularly significant on account of the fact that Dr. Curtis was especially impressed with the importance of after-treatment and the repetition of the operation, and no doubt used both as thoroughly as the circumstances permitted.

The patient was a woman forty-six years of age, who, four months before entering the hospital, had been thrown from a carriage, striking on her left shoulder. She had suffered from great pain ever since, but there was no heat nor swelling about the joint.

The diagnosis of periarthritis seemed to be confirmed by the discovery of adhesions, at the time of the first operation, which gave way with a distinct noise, and left the joint smooth.

In all, seven operations were performed, separated from each other by a few days' interval, and between each two operations the shoulder was packed in ice. The adhesions re-formed, however, and the patient was finally discharged unrelieved.

Similar ill success attended the treatment of a boy operated on twice by Dr. J. C. Warren, in which, with his permission, I also tried to carry out the after-treatment by means of passive movements. In this case also the shoulder was kept cold with ice.

As a counterpart to these cases in which the treatment was protracted, but unsuccessful, the two cases of Desplats are of interest. In both the affection was spontaneous; and in the first distinctly of rheumatic origin, being complicated, at the outset, with pronounced inflammation of several other joints, which was treated for some time, and with benefit, by salicylic acid. The after-treatment of the shoulder was attended with the same difficulties that have been spoken of in some of our own cases, that is, there was great pain after the operations, and passive motion was, at first, out of the question. The second operation was followed by signs of lymphangitis along the inner side of the arm and fore-arm. At the third operation the adhesions were found to be less resistant, and from this time steady improvement took place, the patient being finally discharged cured a month and a half after treatment had been first begun. The muscles of the hand which, together with the arm and shoulder, had been much atrophied, had by this time recovered their volume. The rest still remained somewhat atrophied. In the second case the operation was performed in the month of December, and it was not until the following May that the patient was discharged cured.

---

[1] Concluded from page 512.

From these results we may draw the conclusion that the incurability of an obstinate case should not be too readily assumed.

We may now try to answer briefly the questions by which we previously found ourselves confronted: —

First, as to the diagnosis. It would be difficult, perhaps impossible, to prove with certainty that a portion of the adhesions referred to were not within the joint itself; still more, that there was not some degree of arthritis present. Still there are several pieces of inferential evidence of much value. The first in importance is the single recorded autopsy, which, so far as it goes, is conclusive. Next, we have noted the absence of the signs of effusion, and the fact that the joint after the operation has always seemed perfectly smooth. Indeed, so far as adhesions are concerned, I cannot find any evidence that they often occur in joints, as the result of injury at least. Surgical textbooks speak of them freely enough, but the language of the pathological anatomists is much more guarded.

Thus Birsch-Hirschfeld says that synovial membranes are really more allied to mucous than to serous membranes in some respects. Sometimes in rheumatism, and also as the result of injuries of joints, membranous masses may be found adhering to the articulating surfaces, or floating in the effused fluid, "but contrary to what occurs in the case of the pleura, pericardium, etc., it happens very rarely that this inflammation shows any great tendency to the formation of false membranes leading to anchylosis of the joint." Even where purulent arthritis is in question he says that the joint may escape permanent injury, the impairment of motion which results being commonly due to the retraction of the inflamed capsule and surrounding tissues. The exception to this rule is found in the case of the chronic arthritis of rheumatic origin, such as habitually attacks a number or all of the joints of the body at the same time.

It would be more difficult to prove that in some of these cases a slight degree of true arthritis was not present. If present, however, it did not reveal itself in any instance by an unequivocal symptom. It doubtless happens occasionally that prolonged rest sets up slight disease in joints, and in rare instances even adhesions between the articulating surfaces.

Dr. E. H. Bradford has reported a case of the latter kind, to which he kindly allows me to refer. It is that of a man whose leg was amputated at the thigh for necrosis. Actual fibrous adhesions were found in the knee-joint, for which no cause could be found except the prolonged immobility to which muscular rigidity had subjected the limb. Still this result probably presupposes a very long time of immobility. Furthermore, the shoulder-joint is not prone to inter-articular disease of any kind, and the weight of the arm must tend to counteract the effect of muscular spasm in causing undue pressure.

Whether the chronic form of painful rigidity so often met with in old hemiplegias is, or remains, a pure periarthritis I do not know, but there is reason to think that cerebral disease may seriously impair the vitality of this joint, and even set up there an inflammation with serous effusion resembling that of acute rheumatism.[1]

It would, however, be a piece of pure scientific finessing to go on enumerating the conditions under which arthritis of the shoulder-joint might possibly arise. The aim of this paper is purely practical, and is reached in showing that in this large group of cases, which are clinically so similar, the chief lesion at least is an inflammation of structures outside the joint, which sometimes leads to the formation of adhesions, and that these adhesions may be forcibly broken down without materially endangering the joint itself.

With regard to the frequency with which inflammation of the acromial bursa occurs, Jarjavay, in a valueable paper upon the dislocation of tendons, considers that it is not an uncommon result of even slight injuries to the shoulder. He declares also that he has repeatedly seen evidences of thickening of the tissues both within and without this cavity in examining the bodies of workmen who have used their arms for hard labor. Jarjavay believes that this bursitis is the real lesion in some of the cases which are diagnosticated as dislocation of the tendon of the biceps.

The pathology of this whole subject of periarthritis and bursitis is treated of at some length by Roustan in the Montpellier Médicale[2].

He divides the cases into many groups, according to their origin, — in rheumatism, gonorrhœa, traumatisms, etc.; and the nature of the lesions or exudation, — as acute, sub-acute, chronic, serous, purulent, fibrous.

He also calls attention to the fact, which is certainly a striking one, that the cases cited by Jarjavay, in which the bursa was the seat of acute or sub-acute inflammation, with serous effusion, did not end, like those of Duplay, in the formation of fibrous adhesions, but recovered without this complication.

In one or more of Jarjavay's cases a considerable amount of fluid had been effused into the bursa and was withdrawn by a fine trocar.

It would certainly surprise those who have not especially investigated this point to see how large a cavity may normally exist within thesub-acromial bursa.

As regards the second question, I have already shown reason to think that the *prognosis* in untreated cases is not as unfavorable as Duplay maintains, although their duration is doubtless much longer than under appropriate treatment.

Furthermore, it is possible that very energetic and persistent application of massage, electricity, and passive motion, even without the aid of the operation, may sometimes bring about a cure. It would be a just matter for experiment, if in any case this latter course should be decided on, to try whether in the intervals of passive motion the limb might not advantageously be kept absolutely at rest by means of a suitable apparatus, in order to remove one potent exciting cause of the pain, namely, slight traction on the irritated nerve filaments about the joint.

Finally, we come to the question of *operative treatment.* Why operate; and why not operate?

---

[1] Charcot. Mals. du Syst. Nerveux, t. 1.

[2] 1880, t. 44, 45.

I have no intention, in offering an answer, of passing over more than one corner of that eternal battle-ground of surgical opinion, the question of the forcible mobilization of anchylosed joints. The battle has recently been re-fought in detail by a number of able surgeons of the Société de Chirurgie.[1]

A careful reading of that discussion has led me to believe that no great difference existed in the minds of the opposing speakers upon questions of principle, and that had they seen more of each other's practice, the best of them would have agreed as to the treatment of most of the specific cases. Both sides claimed as their own doctrine, that in this discussion, generalizations were to be avoided; the consideration of the particular joint concerned, the particular disease concerned, and the stage of the disease, giving the only key to a correct judgment.

The remarks which struck me as the most reasonable were those of Le Fort. Admitting the proposition of Verneuil, the warm advocate of non-mobilization, that in many cases of stiffness, where real joint disease either does not exist or has been cured by rest, etc., the muscles themselves will eventually restore the lost motion, he maintains that by careful passive motion we may often aid nature, and abbreviate what would otherwise be a long and painful convalescence.

With regard to the joint, and the disease concerned, we certainly have in the shoulder an articulation which is well known to be comparatively little liable to the severer forms of joint disease.

All of the instances, I think, without exception, which are cited in the discussion to which I have alluded, as well as in the little book by Wharton Hood, and the paper by Howard Marsh, to show the mischief that occasionally results from over-active interference, relate to other joints than the shoulder, and to conditions of far more complete anchylosis than those here referred to.

While, however, the shoulder is relatively little liable to be the seat of serious disease, its motions are especially apt to suffer impairment from the indirect effects of slight inflammation external to the joint, namely, from pain and the resulting spasm and inhibition of the muscles. This may be, in part, on account of the relations of the head of the humerus to the sub-acromial bursa.

It has been said, in fact, and with justice, that the shoulder-joint is practically double. That part of it in which the acromion is concerned is, however, not at the centre of motion but at some distance away from it, and even very slight movement must drag on the tissues around the bursa. If these tissues are thickened, and contain nerve filaments, it is easy to see how pain would be liable to result.

It is not impossible that the great and rapid relief to pain which the operation has sometimes afforded is due to a stretching of these nerve filaments and the freeing of them from the slight fibrous bands which dragged on them and had kept them in a state of irritability, if not causing actual neuritis.

In view of the facts that I have mentioned, I believe an examination under ether, with a view to rupture of adhesions, to be the proper treatment for cases of stiff shoulder, accompanied by considerable spontaneous pain, provided that there were absolutely no signs of inflammation of the joint, and that the affection had come on as a result of prolonged rest or a trifling injury.

If there were rheumatic disease, or a history of more severe injury, or if the first operation failed to give relief, I should give a guarded prognosis, though still regarding as possible a cure by persistent manipulation, or by repeated operations.

By after-treatment in these cases is meant, evidently, something far more energetic than would at first be supposed. It consists in the thorough application of electricity, massage, and douches, used daily, or even, as in one or more of Duplay's cases, twice a day.

As I have said, where the operation is unsuccessful or is not indicated, the use of prolonged applications of the galvanic current, and of ice bags, may do much to relieve the pain.

Considering the large share in the result which seems to attach to after-treatment, it may be worth while to seek by analysis some more exact knowledge of its modus operandi.

The uses of *electricity* are two perhaps threefold: —

(1.) Under the form of the galvanic current (prolonged applications to the affected nerves) it may allay neuritis.

(2.) Under the form of the Faradic current it may improve the nutrition of the wasted muscles.

Neither of these procedures, however, are directed to the main end in view, the removal of the adhesions.

Finally (3), by means of a strong Faradic current, and under cover of its anæsthetic influence, small intra and sub-muscular adhesions may possibly be broken up, as sometimes occurs, perhaps, in muscular rheumatism.

The use of *cold douches* must be mainly in restoring the bone and nutrition of the muscles. Both that procedure and *packing the part in ice* may also cause a degree of local anæsthesia which permits more thorough use of passive motion.

The action of ice in preventing the re-formation of adhesions was, in our cases, not at all marked, though the applications were very thoroughly made in several cases.

Massage, like Faradism, of course helps the nutrition of the muscles and the circulation of the parts, but I believe that its main influence is the same with that of passive motion, that is, that it helps to break down, or stretch, adhesions, and that it should be employed with that end in view.

Finally, as to *passive motion*, I will only say that I believe it to be often of service, even when no measurable result is obtained at the moment; and my reason for this is, that the same is true of the patient's voluntary efforts in cases where they are destined to be eventually successful.

As to the operation itself, I have only to say that it is probably far better, if not indeed almost necessary, that the patient should be fully under the influence of ether.

The exception to this statement is perhaps that if a surgeon were to acquire the skill of the professional "bone-setters," learning to take the muscles unawares and carry the limb with great rapidity through its normal motions, in the manner which is described so well in the little book of Mr. Wharton Hood (The Bone-Setter), the necessity for etherization might sometimes be done away with.

This is probably not without its danger however, at the best, for the examination of the condition of the joint is not easy unless the muscles are relaxed by ether.

It is worth mention, without comment, that Jarjavay says a good way to move the arm on the scapula, in spite of the patient, is to cause the deltoid and the supra-spinatus muscles to contract simultaneously, by means of electricity.

---

[1] Bulletins et Mém. de la Soc. de Chir., July, 1879, *et seq.*

It does not seem to me, however, that this suggestion is of much practical value. It is not easy, even when dealing with healthy muscles, to fairly raise the arm in the air by Faradization, and this becomes much more difficult when they are atrophied from neuritis.

Duplay gives directions for having the shoulder-blade fixed by an assistant with the aid of a sheet passed round the body. This is not always necessary, however, especially if the first movements used are those of moderate rotation. The latter caution has also been recommended for another reason, namely, to avoid all danger of dislocating the arm, which it is thought might attend efforts at abduction, if the head of the bone were strongly confined by adhesions. For a similar reason the movements of the head of the bone should be controlled by one hand whenever the arm is carried near the limit of its physiological motion in any direction. It is advised that at each operation all the adhesions should be thoroughly destroyed.

The case of young children, suffering from this affection, deserves special attention. Whether their arthritic and periarthritic tissues are invariably more prone to adhesive inflammation than those of adults I cannot say, but certainly I have seen two cases where forcible mobilization was attended with great difficulty, and in one of them, in fact, the epiphysis was twisted off in the effort. It united again without difficulty, but no gain in motion was effected. Sometimes in the case of adults also these adhesions are excessively firm.

I have now under my care a young woman in whom the affection in its most typical form came on spontaneously two months before I saw her. There was at first great spontaneous pain in the arm, but never, to judge from her account, any considerable local inflammation.

When I first saw her there was marked atrophy of the deltoid, and, to some degree, of all the muscles of the upper arm and shoulder, and tenderness on pressure just beneath and behind the acromion, as well as over the coracoid process.[1]

Motion at the scapulo-humeral joint was free and painless to a certain very limited degree. Then it was suddenly arrested, and efforts to move the arm further excited great pain. I etherized her, with the intention of breaking down the adhesions should they yield to moderate force, but this was not the case, and I have therefore concluded to try for a time the effect of passive movements alone.[2]

Let me, in conclusion, call the attention of those interested to the remarks of Le Fort[3] on the prevention of these false anchyloses of joints.

During the treatment of certain dislocations, namely, as those of the shoulder; also where joints have to be kept at rest on account of fractures in their neighborhood, and even in certain joint diseases, but only after the entire subsidence of active inflammation, he removes the apparatus, and, keeping the parts perfectly supported, carries the limb *a single time* through a movement, or part of a movement, slowly and carefully, with his own hands, repeating the operation only after another few days, and so on. I leave it to those better qualified than myself to judge of the value of this procedure, from which he claims great abridgment of the period of stiffness after the cure of the original affection.

To avoid lengthening this paper I have omitted all mention of other affections which might give rise to painful stiff shoulder, such, for example, as dislocation of tendons. Mr. Howard Marsh[4] speaks of these as well as of other conditions in the treatment of which the so-called "bone-setters" win their reputations. A paper by Mr. Bruce Clarke reported in the Proceedings of the Abernethian Society[5] should also be consulted.

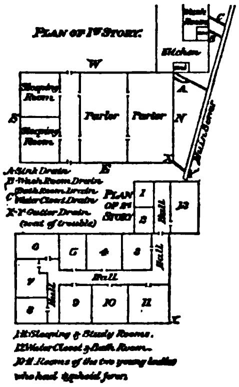
Besides several instances in which forcible passive motion was applied to the shoulder with marked success, he relates similar cases of stiffness of the finger joints supervening in the course of the treatment of Colles' fracture, and gives also an account of the dissection of some fingers which had been stiff for a long time, showing that the joint itself remained healthy. The fact is also dwelt upon that the skin and other tissues around immovable joints become brittle and tear with ease, showing that caution is necessary in the treatment of cases of long duration.

◆

TYPHOID FEVER AND SEWER GAS.

BY EDWARD O. OTIS, M. D.

During the last summer I was called to take temporary charge of a young lady sick with typhoid fever. I learned that she was taken sick directly or soon after her return from boarding-school, and also that several of her schoolmates were sick apparently with the same disease. Suspecting some common source of infection at the boarding-school, I communicated my suspicions to the principal of the school, and through his kindness I found that the following condition of things had existed, which the annexed plans will render intelligible.



The boarding-school building consists of three stories. Along the north side runs a sewer, as shown in the plan, having its outlet four hundred feet beyond the northeast corner of the house. Into this sewer empty drains from the barn cellar, wood shed, sinks, water closet, bath room, and wash room. There is a ventilation into the kitchen chimney. The water from the gutter on the east side of the house was carried down, at the northeast corner, by a tin tube into an iron pipe placed vertically in the ground at the point *X*. This tube did not fit into the iron pipe closely. This iron pipe was cemented into a piece of drain pipe which was connected with the main sewer at the point *Y*.

---

[1] See Desplats.

[2] A month has elapsed since the above statement was made. For about ten days the patient was manipulated thoroughly, but without effect. She was then etherized again, and a number of firm adhesions broken up, which the patient could certainly never have ruptured by her unaided muscles. After the operation a fine crepitation was felt, behind the upper end of the arm, on rotation, but its origin could not be definitely ascertained. A good deal of pain was felt for a day or two, and some prostration for a few days more, so that a week elapsed before the patient returned to my office. Passive movements were then resumed, and a week later the operation was repeated. The adhesions had re-formed, but were not so unyielding as before, and their rupture was followed by little or no pain.

From the time of the first operation there has been gradual but steady improvement in all respects. There is no spontaneous pain, motion is considerably freer, and muscular power and strength have greatly increased. At neither operation was it possible to rotate the arm outward to quite its normal limit since the movement was arrested by strong bands, apparently deep fibres of the pectoral muscle, either glued down or greatly retracted. There was no inflammatory reaction of consequence after either operation.

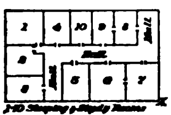
[3] Bull. et Mémoires de la Soc. Chir., March, 1880.

[4] Loc. cit.

[5] St. Bartholomew's Hosp. Reps., 1878, p. 339.

This drain pipe *had no trap;* it had been ordered, but it had been forgotten or neglected. Provided the tin tube had been tight, and had fitted tightly into the iron pipe, all might have been well, and this outlet served as another ventilating tube. As it was, however, the sewer gas generated from the water closet and kitchen waste easily escaped and entered the circulation at this corner of the building, contaminating the air about.

Plan of 3d Story.



1-10 Sleeping & Study Rooms 6-7-8 Rooms of the young ladies who had typhoidal symptoms, or mild typhoid.

The tin tube passed directly by room No. 11 in the second story to the gutter just above the windows of rooms 6 and 7 in the third story. These windows were open at the top much of the time. The result was as follows: —

Miss M., who occupied room No. 11, had typhoid fever and died.

Miss P., who occupied the adjoining room, No. 10, was severely sick with typhoid fever, and, incidentally, her brother and nurse in the same house were subsequently sick with it.

Misses N. and H., who occupied rooms 6 and 7 in the third story, directly over Nos. 10 and 11, were "threatened with fever, and had malarial symptoms."

Miss G., in No. 8, opposite No. 6, had "slow fever."

Two other young ladies were said to have been sick, but in what part of the building they roomed or what the disease was I do not know.

The defect was remedied by taking up the drain *X—Y*, and allowing the gutter water to run free on the ground.

◆

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

REGENERATION OF CILIARY NERVES AFTER NEUROTOMY.

THE anatomical evidence of regeneration of the ciliary nerves after optico-ciliary neurotomy has been so meagre, and the subject is one of so much practical importance, that the results attained by Krause[1] from examination of four eyes which had been subjected to the operation are of interest, all the more as these eyes were enucleated at periods varying from two months to two years after neurotomy, and, therefore, presented different stages of regeneration. The subject was studied especially from sections made through the posterior parts of the sclera and retro-ocular tissue, and these were compared with sections of the normal sclera.

In the eye enucleated two months after neurotomy about half of the nerves seen in the scleral sections were atrophied; the others were smaller than normal nerves in this situation, but contained normal fibres. At three and a half months the number of nerves found in the sclera was greater, but their average size was decidedly smaller than in the healthy eye; no atrophic nerves were seen; the larger part of the nerves appeared normal, but many still lacked the axis cylinder, and the nuclei were numerous. At fifteen months the number of nerves was much larger, their size usually small; histologically they were all normal except for an increase in the nuclei. Finally, at two years all nerves were normal, but their average size smaller.

Krause convinced himself that the increased number of nerves was the result of neurotomy and not of previous inflammatory changes in the eyes by comparison with an eye which had undergone extensive alterations in consequence of trauma, but which had not been neurotomized. The theory of Ranvier, that the peripheral portion of divided nerves atrophies and regeneration takes place through out-growth from the central ends, seems to be the only one which would satisfactorily explain the conditions here present. The growing nerve fibres follow in their course into the eyeball the path which offers least resistance; some may find and follow the track of the original, atrophied nerve stems, but others will break up into smaller bundles the more easily to force a way through the sclera.

This latter view seems to be supported by the result of observations of Poncet[2] on regeneration of the nerves of the cornea after division of the ophthalmic branch of the trigeminus in the rabbit. A year after such division microscopical examination showed a net-work of nerve fibres in the cornea, crossing each other so as to form an inextricable confusion, and differing widely from the normal method of distribution. It even seemed as if the number of nerves was greater than the normal, but as they were of small size the real number of fibres was probably less. At the same time the sheaths of the original nerve stems at the periphery were found to be in part empty of fibres, in part to contain a very few.

Similar irregular course and distribution of the regenerated nerve fibres had also been observed by Ranvier after circumcorneal section of the corneal nerves.

THE ANATOMY AND NOSOLOGY OF RETRO-BULBAR NEURITIS. (AMBLYOPIA CENTRALIS.)

The combination of symptoms to which Von Graefe gave the name of retro-bulbar neuritis has hitherto lacked anatomical demonstration. Though there could be little doubt that the seat of the lesion was in the opticus, it was yet undecided whether the process was primary and inflammatory, or secondary, descending, and atrophic. Fortunately Samelsohn had the opportunity for anatomical investigation of a case observed during life, and he has made it the basis of an elaborate and extended discussion of the whole subject.[3]

Among one hundred and fifty-four cases of diseases of the optic nerves observed in the course of two years were twenty of retro-bulbar neuritis, or, including the toxic amblyopias, fifty-seven; the disease must, therefore, be reckoned among the most frequent idiopathic opticus affections.

The case investigated was that of a man sixty-three years old, who suffered a considerable loss of sight within the space of a few weeks. There was now a small, central, "relative" scotoma for green and red in each eye; peripherally the field was unaffected; the disks normal. Diagnosticated as alcoholic amblyopia, and treated by abstinence, in two months the scotoma had increased in size, perception of blue also was impaired and white appeared bluish, the margins of the disks were slightly hazy, there was severe headache. Diagnosis changed to retro-bulbar neuritis. Under treatment by mercurial inunction and a seton in the neck the headache vanished, but the eye symptoms remained unchanged. Two years later, a large absolute scotoma, outer boundaries of the field normal, the lateral half of each disk pale. Death from heart disease.

---

[1] Archives of Ophthalmology, xi., 3.

[2] Archives d'Ophthalmologie, t. i.

[3] Archiv für Ophthalmologie, Bd. xxviii., H. 1.

Within the cranium both optici were normal, but in the optic foramen was a marked change; there the nerves were much flattened vertically and diminished in size. Sections from this part showed only a narrow peripheral zone of healthy nerve fibres; the central portion was almost completely occupied by the connective tissue frame-work, thickened and distorted, with great proliferation of its nuclei; the nerve tissue was almost wholly destroyed. Farther toward the eye the nerves became round, as did also the atrophic district, while at the same time the latter assumed gradually a position more toward the outer side, till at the place of entrance of the central vessels it was in contact with the sheath; from this point to the eye the atrophied part took on more and more the form of a wedge, its apex at the central canal, its base outward, and comprised not quite one third of the area of the nerve section. From the optic foramen forward the signs of interstitial inflammation gradually gave place to those of simple gray atrophy, the result of the destruction of the nervous tissue above. In the right nerve also with the entrance of the central vessels there was a renewal of interstitial inflammation. In other respects the changes in the two nerves were alike. The outer half of each disk was atrophic; in the retina, at its outer side, the nerve fibre layer was thinned, its fibres atrophied, the ganglion cells entirely absent. On the median side the retina was normal.

The author concludes from the conditions here found that in the optic foramen the fibres going to the macula lie in the axis of the nerve, and from thence follow the course above described to the eye.

It seems justifiable to draw general conclusions even from one anatomical investigation when it is considered that there is here a peculiar combination of symptoms with an equally peculiar anatomical alteration, and one which has, moreover, never been observed as the basis of any other disease, especially when the changes in both optici offer a remarkable correspondence. The pathological anatomy of retro-bulbar neuritis may then be regarded as solved in its main points. It is a partial interstitial neuritis of the opticus, with marked tendency to shrinking, and secondary descending atrophy of the nerve fibres.

In light cases, which wholly recover, the interstitial process passes off without leading to shrinking and secondary atrophy, indeed there may even be hyperæmia. That there is in some cases atrophy of the temporal side of the disk is demonstrated by this case. When with persistence of scotoma there is no atrophy of the disk it may be that the interstitial inflammation comes nearer to the disk and excites the formation of new vessels there. It is well known that partial hyperæmia of the disk is still more difficult to diagnosticate with certainty than partial atrophy. On the other hand, if early changes in the disk appear, together with peripheral defect of field, for example, cases of acute retro-bulbar neuritis with sudden loss of sight, either in the form of a large central scotoma or total loss of vision, this may be explained, perhaps, by more rapid extension of the process in length and breadth. In these, if sight return, there remains serious defect of central vision, and also decoloration of the disk, particularly of its lateral half.

Why the process is a partial one and affects by preference the fibres going to the macula is a question which Samelsohn answers by assuming that the original change is generally situated in the optic foramen, and that there the arrangement both of lymph and blood vessels is such as to favor disturbances of circulation and nourishment.

The causes of the disease may be divided into two groups, cold and intoxicating substances, especially alcohol and tobacco. Often the influence of both is combined. In women the disease seldom occurs. Certain classes of workmen, necessarily exposed to sudden changes of temperature, are particularly disposed to the affection. Lassar's experiments on dogs and rabbits show that sudden cooling of the previously heated surface constantly produces interstitial changes in many internal organs, among others the nerve sheaths, while the parenchymatous parts escape, and he explains this on the theory of Rosenthal, that the blood cooled at the surface, and, rapidly driven inward, acts as an excitant of inflammation. The fairly direct vascular connection of the skin of the face and the orbital opticus makes this theory plausible for the disease under consideration. Alcohol also affects the interstitial tissues primarily. The influence of tobacco alone seems rarely to cause proliferation of the connective tissue, since the prognosis in such cases is good; it may act either directly on the nerve substance or through the circulation. That the opticus is specially affected can only be accounted for on the assumption of individual disposition, as in other points of pathology.

At the beginning of the disease patients generally experience more difficulty in reading than at their ordinary occupations; a mist, in continual motion, occupies the central part of the field, but now and again may divide for an instant, and allow tolerably free vision. This often appears as a luminous vapor, and may be seen even in the dark, but is usually the more troublesome the brighter the light. Hence patients imagine they see better in dull light; the improvement, however, is not real. Later, with an absolute scotoma, this symptom is mostly absent. It is due to irritation of the nerve fibres from disturbance of circulation. In fresh cases the scotoma is usually relative, that is, function is diminished or altered, not lost. Afterward, in the middle of a relative scotoma, a small, absolute one often develops. Even with the most extensive absolute scotoma there is always a surrounding zone in which the disturbance is relative. The form of the scotoma is various, but the most common is that of a horizontal ellipse; it is ordinarily central, and extends farther toward the blind spot, which, however, it seldom passes; in rare instances it is paracentral.

Defect of color perception is always demonstrable in a relative scotoma, red and green being earliest affected. In light cases there is only an alteration of shade, in more severe of tone; still there are exceptions to this. Again, the color may appear flecked with spots of gray or of another color; white also may be spotted with gray or blue, or appear bluish.

Almost without exception improvement begins at the periphery of the scotoma and progresses toward the centre; yet in a few cases Samelsohn observed first a clearing up in spots, and supposes that in these there were islands in the affected part of the nerve in which the inflammation was less intense. In general the inflammatory alterations, as in the case examined, are most marked at the axis of the nerve.

The light-sense Samelsohn found always diminished, and proportionally to the size of the scotoma, but not in correspondence with the deterioration of vision.

The amount of vision does not of itself give information as to the severity of the case. The stage of the disease has great influence on the visual acuteness. The more recent the disease the greater are the phenomena due to irritation, and the more proportionally is the loss of vision, while at a later stage the vision is dependent on the size of the scotoma. And here the relative scotoma is of as much importance as the absolute; an extended relative with small absolute scotoma, usually depresses the sight more than a fairly large absolute scotoma surrounded by a narrow relative zone. Yet the prognosis is the more favorable the smaller is the absolute scotoma.

Samelsohn recommends, as indicated by the character of the disease, potassium iodide, in doses increased from thirty to seventy-five grains daily, continued for six or seven months if it be well borne, and resumed again after a short interval. With this treatment he has been far more successful than ever before, even in old cases having found decided benefit. Only after about six weeks is the first sign of improvement to be expected, as shown by narrowing of the scotoma. The results of testing the vision are to be taken only with great caution, since there is frequent change in the degree of functional fatigue. Where an absolute scotoma cleared up it always changed first into a relative, and diminished gradually in size; never did he see a clearing at the centre, so as to leave a zonular defect. In the most acute cases, which begin with sudden large absolute scotoma, inunction for a time at first seemed of service. Central amblyopia is declared to be the most amenable to treatment of all diseases of the opticus.

At the end of his essay Samelsohn refers to a case of central amblyopia in a diabetic patient, reported by Nettleship and Edmunds in the Transactions of the Ophthalmological Society, vol. i. In that case the anatomical changes in the opticus from the entrance of the central vessels up to the disk agreed entirely with those above described. The portion of the nerve farther back was not removed, and, of course, not examined.

CORTEX HEMIANOPIA.

Haab[1] reports two cases of homonymous hemianopia in which the autopsy showed the visual disturbance to be due to a lesion of the cortex of the brain, very closely identical in situation in each. Such cases are of importance, both for the determination of the position of the opticus centre in the human brain, and of the question whether each centre is in connection with the corresponding halves of the two retinæ. The more accurately it can be demonstrated by post mortem that the cause of the visual defect in homonymous hemianopia lies in the destruction of a certain district of the cortex of one occipital lobe, the more improbable is the theory of Charcot and Landolt that the opticus fibres which do not cross in the chiasma do yet cross farther back in the brain, a theory which it is difficult to confirm or disprove by pure anatomy. Careful observation of such cases in man may also serve to round out the results of the experiments of Ferrier and Munk on animals.

The first case was Huguenin's patient, a girl of eight years, poorly nourished, with chronic inflammation of the cervical glands, the head large from infancy. Following whooping-cough her intellect became dull, then she had headache, was irritable, slept poorly, vomited; later, convulsions, beginning in the distribution of the facial nerves, involving the arms and legs, and succeeded by unconsciousness for some half hour. For a time the fundus was normal, then optic neuritis developed. A little later, although the cerebral symptoms temporarily improved, hemianopia came on, the left half of the field wanting in both eyes. There was never any paralysis or loss of sensation.

Post mortem, two caseous tubercular masses were found: one at the apex of the left frontal, the other at the median surface of the apex of the right occipital lobe. All nerves were intact. Only the tumor of the occipital lobe can have caused the hemianopia; this was situated in the sulcus hippocampi, measured three centimetres in height and length, and 2.5 centimetres in width, and extended some two centimetres into the brain substance.

The second patient was a woman of sixty-one years. After an endocarditis and pericarditis came a paresis of the limbs of the left side, from which she almost wholly recovered. She had, however, left hemianopia, the line of demarkation sharp and vertical, with normal vision in the right half of the field in both eyes. The fundus was normal. No other symptoms of cerebral disturbance. This condition persisted unchanged till death, a year later, from heart disease.

In the brain the only lesion discovered was at the median side of the right occipital lobe, where the cerebral substance in the whole region of the sulcus hippocampi was destroyed, probably in consequence of embolism. Chiefly cortex was involved in the degeneration, between which and the posterior cornu was a tolerably thick layer of white substance. The destroyed portion extended from the apex of the lobe forward six centimetres, and had a width of two to three centimetres.

No other pathological changes in the whole brain. Microscopic examination of the optic tracts, chiasma, and nerve showed no atrophy. No lesion to explain the disturbances of motility which existed for a time after the occurrence of the embolism was found, and it is, therefore, to be assumed that derangements of circulation in the motor tracts of the right hemisphere were the cause of the hemiparesis.

A case reported by Curschmann,[2] in which the position of the lesion presents a striking correspondence with those given above, may well be added. A man of fifty years, previously healthy, was brought to hospital suffering from the effects of swallowing sulphuric acid. He could not swallow, and was nourished by enemata. The organs of circulation appeared normal. A week later, embolism of the right brachial artery. The following morning he complained that he could not see in the left half of either field of vision. Examination showed complete hemianopia, while central vision, the right half of the field, and the fundus of each eye were perfectly good. Except slight delirium, no other symptoms of cerebral lesion. Death after a fortnight from inanition. The autopsy gave the usual alterations in the intestinal tract; an inflammation of the intima of the aorta, propagated from the œsophagus; an embolism of the right brachial; in the brain, with normal appearance of cerebellum and optic tracts, a large patch of softening in the right occipital lobe, which extended to the surface, and was mainly at the median side and apex of the lobe.

---

[1] Monatsblätter für Augenheilkunde, Mai, 1882.

[2] Centralblatt für practische Augenheilkunde, 1879, p. 181.

THE CENTRE FOR COLOR PERCEPTION.

The fact that altered perception for colors, not only congenital but acquired, may exist without any disturbance of perception of space or light, suggested that there might be a distinct centre for color perception. And the question as to the existence of such a centre would appear to be settled in the affirmative if cases are observed in which, with perception of light and space everywhere perfect, there is complete homonymous hemianopia for colors. Such a case is reported by Samelsohn,[1] who also refers to corroborative cases published by Treitel and Landolt.

A man, sixty-three years old, complained of disturbance of vision, which dated from an apoplectic attack, with right hemiplegia, nine months before. Motion was in great part restored, and sensibility wholly. Slight paresis of the right superior rectus. Examination with the ophthalmoscope discovered nothing abnormal. Vision in either eye $\frac{1}{2}$, the same as at an examination several years before, and not abnormal for the age and media. As the character of the complaints pointed to hemiopia the field of vision was carefully tested, but even with small squares of white it appeared entirely normal in extent. The use of tinted paper, however, showed a typical left-sided hemianopia for all colors, the line of separation sharp and vertical. To the left of the line each color appeared of a more or less saturated gray, while to the right it was recognized perfectly. It was the same with light transmitted through colored glass in a dark room. Perception of space and sensibility to light were apparently quite normal. Under treatment the paresis of the rectus disappeared, but the hemiopia remained the same till death, from apoplexy, three or four years later. No post mortem could be obtained.

TUBERCULOUS MASS GROWING FROM NEAR THE OPTIC DISK.

Dr. Brailey reported the case.[2] A tuberculous mass, apparently primary, sprang from the optic disk and immediately surrounding choroid, simulating in some of its clinical features a glioma. The globe was enlarged and its tension increased. The cornea was increased in size, and the anterior chamber was deepened. The retina was detached, except from the ora serrata, and it was this membrane with its vessels that was visible during life through the clear lens. There were many point-like posterior synechiæ. Though the mass, which presented all the histological evidences of tubercle, replaced the tissue of the papilla, it did not extend backward beyond the lamina cribrosa, nor laterally for any distance in the choroid. As there was no precise microscopical evidence that it had originated in the retina or tissue of the papilla, the author presumed that a choroidal origin was the more likely in view of the number of cases of tuberculous choroidal disease that had been described. The patient, a boy aged two, the second child, was stout and well, but had been within a few months very thin and weak. The eldest child was four years of age. Before this there had been a miscarriage of four months. The mother died of consumption six months before the excision. The father was said to be very healthy. The after history of the patient could not be traced.

Anatomical Memoranda.

ABNORMAL DISTRIBUTION OF ARTERIES AT BASE OF BRAIN.

BY S. G. WEBBER, M. D.

ABNORMAL arrangement of arteries in the circle of Willis is rare.

At a recent autopsy such an irregularity was noticed. The two anterior cerebral arteries came so near each other that the anterior communicating artery was only about one line in length. The right posterior communicating artery was only about one tenth the usual diameter, the right posterior cerebral artery was twice the usual size, or larger. The left posterior communicating artery was nearly twice the usual size, and virtually was the origin of the posterior cerebral; the left posterior cerebral was about half the usual size until it met the posterior communicating. Thus the region supplied by the right posterior cerebral artery received very nearly all its blood through the basilar; that supplied by the left posterior cerebral artery received more than three fourths its blood through the left carotid.

The right posterior cerebellar was so small it could not be distinguished from other small and terminal arteries. Its place was taken by one of the branches from the basilar, which was larger than usual, and, after passing backwards and upwards over the surface of the cerebellum, curved forwards and downwards to occupy the normal position of the posterior cerebellar between the cerebellum and medulla. The basilar artery was rather longer than usual, the vertebrals uniting at a lower level than normal. The middle cerebral arteries and the anterior cerebellar arteries were normal.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

NOVEMBER 27, 1882. DR. J. C. WARREN presided.

SYNOVITIS.

DR. HODGES read a paper entitled Painless Synovitis.

In answer to a question by Dr. Abbot, as to whether the pedometer was reliable in registering the amount of walking done by nurses in the hospitals, Dr. Hodges replied that perhaps it was not so reliable as might be wished, but that it was the best means which we had for estimating these distances.

Dr. Hodges also spoke of the fatigue experienced by horse-car conductors during their first week of service, and of their gradually becoming used to standing for many hours without rest, the variety of their occupation and the fresh air being of great advantage to them.

DR. CHEEVER said that where a laxity of the articular ligaments has been caused by their being stretched, as in cases of effusion, great annoyance is experienced, as the tissues, under these circumstances, are slow to repair. He also mentioned the case of a woman who had swollen knees at each menstrual period, the swelling disappearing in the intervening three weeks. Standing always seemed to him to be more fatiguing than walking. He believed in walking, provided that it was not overdone ; he did not believe in the elastic knee cap, as it atrophies the muscles more quickly than anything else.

---

[1] Centralblatt für die med. Wissenschaften, Nos. 47 and 50, 1881.

[2] Ophthalmic Review, November, 1882.

Dr. H. W. Williams suggested that the constant jarring of the street cars carries an impression by the spinal cord to the brain, causing nervous exhaustion and the fatigue experienced by horse-car conductors, and he mentioned the same effect which some people feel when riding in sleighs and chaises.

Dr. A. T. Cabot spoke of the relief which active exercise gives to the fatigue caused by constant standing over some uninteresting work.

Dr. Bradford stated that the cases he had seen of hydrops articuli had not occurred, as a rule, in persons who could be called delicate in the strict sense of the word. Constant compression in the form of an elastic knee cap, worn for months, seemed to him not to be beneficial, as it promoted a development of a laxity of the tissues, which it is desirable to avoid in this affection. The experience reported by Dieulafoy and others in aspiration of the knee-joint has been so favorable that it would appear that that method deserved greater prominence than was frequently accorded it. In the cases of aspiration which had come under his own observation, the method seemed entirely innocuous. Repeated aspirations are sometimes necessary before a cure results.[1]

Dr. Rowe made some remarks on the ill effects produced by standing in the hospital among the nurses, and of the great daily distances which he found, by means of the pedometer, he was obliged to walk in the hospital during the twenty-four hours.

Dr. Sabine spoke as follows: —

Dr. Hodges referred to the relative value of the different modes of treatment. I have used the rubber bandage in a number of cases, although in a very limited number, of course. In two or three the trouble was of traumatic origin, and in the others spontaneous. The result has been very satisfactory. The bandage has been used without any ham splints. It does not interfere particularly with the circulation, and the patients have not complained of pain. In some instances the patients have not been confined to the bed. These were cases of spontaneous origin, of course. The bandage has been left off gradually, either by shortening it or substituting a lighter one.

Dr. Bush stated that he had seen cases of simple effusion in the knee-joint rendered purulent by aspiration.

Dr. Warren said that it seemed at times as if effusion about the knee became almost epidemic about Boston and its vicinity, and spoke of the rarity of the disease in Montreal. He also said that it was hard to see what aspiration accomplished in these cases.

Dr. Hodges remarked that he felt a certain degree of timidity about aspirating the knee-joint, and that he preferred the method of using the compressed sponge as accomplishing as much and as avoiding the danger of making the serous fluid purulent. He thought that the atrophy which follows long compression was apparent rather than real, and that it was not of much consequence, as it speedily recovers. Dr. Hodges also repeated his opinion that these cases were due to disturbance of the general health.

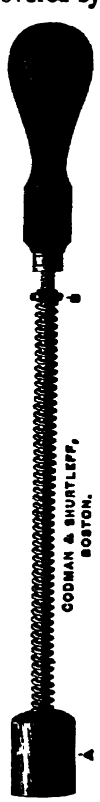
HÆMOPHILIA.

Dr. Nichols read a paper entitled, Hæmophilia in women at childbirth.

New Instruments.

A NEW HEAD PERFORATOR.[2]

The diagrams are to show a perforator intended for puncturing the child's head when such an operation may be called for.

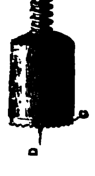


It is a trephine with its teeth thoroughly covered by a movable bell-shaped cap, A, which entirely prevents any injury to the vaginal soft parts while it is being introduced. The trephine is connected with the handle by a spindle seven inches in length. The cap, A, is held firmly in place by a spiral spring which surrounds the spindle, the amount of pressure being regulated by the thumb-screw, B. The perforating end of the instrument being in position on the child's head, the thumb-screw is loosened, and pressing gently on the handle with the right hand the protecting cap slides back over the trephine, as represented at the letter C. If the head is inclined to slip away from the instrument the hand of an assistant pressing firmly downward on the fundus of the uterus will hold the child in place. Two or three turns of the handle, pressing firmly at the same time, will perforate the head easily and rapidly. The centre screw, D, at the first turn will perforate the head and hold the instrument firmly in position, bone of course being perforated, which should always be done.

The left fore-finger should be passed into the vagina with the instrument, and guide it to the part to be perforated.

I do not consider the pelvic curve necessary on a perforator any more than it is on a decapitating hook or knife, which in many instances have to be inserted higher than a perforator.

The expense of the instrument is reasonable, comparing it with others, the price being seven dollars. Braun's instrument, which has a perforating end similar to this, but is more complicated, costs twenty dollars, requires three hands to use it, and being a large cylinder through its entire length, but little room remains in the vagina for the fingers of the left hand.



This perforator having a very small spindle occupies comparatively a small amount of room in the vagina, and requires but two hands to work it. **Robert B. Dixon, M. D.**

---

[1] In the discussion it was stated that theoretically repeated aspirations of the knee would be liable to cause suppuration, as sometimes occurs after repeated thoracentesis. Against this view the following facts may be urged :—

Pleurisy not unfrequently occurs in tuberculous patients.

In a pure hydrops articuli there is no tuberculous or scrofulous tendency. Pleurisy may become an empyema spontaneously.

Dropsy of the knee does not spontaneously change from a serous fluid to pus.

Suppuration following aspiration of the knee is so exceptional as to suggest, when it does occur, a lack of antiseptic precautions.

[2] Shown at the Obstetrical Section of the Suffolk District Medical Society, November 11, 1882.

Medical and Surgical Journal.

THURSDAY, DECEMBER 7, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

ANOTHER DIPLOMA MILL.

A CIRCULAR of the State Board of Health of Illinois gives a very interesting account of an Institution, of which one function, at least, seems to be the issuing of medical diplomas without regard to the merits of the recipient. An interesting array of facts in regard to the matter has been published in the Boston *Globe*. The principal points of the Illinois Board of Health circular are as follows: —

A diploma purporting to have been issued by the "Bellevue Medical College of Massachusetts" was presented to the Board of Health of Illinois as the basis of a certificate entitling the holder to practice medicine in the State of Illinois, in accordance with the Medical Practice Act of that State. The holder being called on for further evidence of his qualifications, stated that he was fifty-seven years of age, but had only practiced medicine during the last five years, and that his diploma was obtained on the fifteenth day of September last.

The Board of Health believed it their duty to gain further information in regard to this hitherto unknown source of diplomas, and at their instigation a young journalist entered into correspondence with the Bellevue College, asking requirements for graduation, setting forth his qualifications in the following: —

"p. S. I have bin redin medisin about a year."

In further correspondence the seeker after the stamp of approval gave the following account of himself: —

> I hav a Good Many friends who I Doctor and they would Ruther have me for a Doctor than any body else for I can Cure them when Other Doctors Cant I Can Diagnose a case every time But as I hav no Diplomy I cant Charge hardly any feas So I nead a Diplomy from a Good Colege but I aint got funds enuff to go Thear I aint got much edication Eather but I dont think a man must go Through Colege to know how to Doctor I know some Doctors who want to cramm Thear heads with Theories and no Practiss and they are so Intolerable that they want Every Man to go to Colege but they are Rich and I am Poor and they want to crowd me out Becaus they are Afrade of Me and if I had a Diplomy I could hold my own with the Best of them,

and added an essay, of which we have space only for a part, and we feel sure the half will prove almost as good as the whole in showing the evidence on which this concern was willing to utter its high-sounding diploma: —

> VACCINATION.
>
> The Grate increase of Disease in thease Late years Calls for Explanation Undoubtedly the Doctors of this Day is to Blame for very Much of it But more than anything Else in My opinion is the Inseartion into the Pure Blood and Vitle fluid of our Inosent offspring of that vile Diseas of the Animals cowpox So grate has the Curse Became that Privelidges of School Edication is Denide in this and Manny other States to Those who wisely Refuse to Submit to this Curse this is just a Peace of the Nonsensickal Medical teachings of the Day when Theory and Imangination Rool Instead of Practical Expearance and wich keaps its Studends in close Confinement a Big part of three or four years to hear the Nonsens which is thear peddeld out to them consumtion Siffles and Skin Disease Runn Wild among the People This calls for a Strong kick on the Part of our noble Proffession. . . .

Some doubt was entertained, after dispatching the above, lest the matter had been overdone — lest even the Faculty of the Massachusetts Bellevue might not think Mr. Kelly "competant." But these fears were promptly dispelled by the receipt of the following: —

> BELLEVUE MEDICAL COLLEGE,
> BOSTON, *Nov.* 2, 1882.
>
> MR. KELLY: —
>
> *Dear Sir,* — You, as a candidate for graduation, have been *favorably considered* by the Faculty; and your *thesis has been examined by the Professors and found to be acceptable.* In consideration that you cannot attend the college, you are required to purchase two tickets of matriculation. *These tickets will show that you will have been under the instruction of the Bellevue Medical College for two years.* These two years, together with the one year you have studied by yourself, will make as much time spent in the study of medicine as is spent by any other medical student from any other college. . . . *Your diploma will be sent C. O. D. one week from the date of this letter.* It will be securely packed in a pasteboard box. Your bill for diploma and two tickets is $150.00. The tickets and diploma go together. The one cannot go without the other.
>
> ———, President.

The "Bellevue Medical College of Massachusetts" received a certificate of incorporation May 25, 1880, under the "Public Statutes relating to Manufacturing and other Corporations organized under General Laws," but the right to confer diplomas was not included in their charter.

The *Globe* of December 2d gives an account of the arrest of the "Dean" of the School, which it calls the culminating point in the exposure, on a warrant charging him with using the United States mails with intent to defraud. When arrested, the "Dean" is said to have made the statement that there is no law to compel any one to study any given length of time before receiving a diploma in medicine, and that no law determines when a college shall graduate a student or confer a diploma.

It is to be hoped that this is really the culminating point of this new industry, and we wish that with the Massachusetts Bellevue might die the whole board of diploma factories. Certainly if the present state of affairs continues we shall soon see at stated intervals by the side of the familiar advertisement of the Association of National Banks for the Suppression of Counterfeiting a reward offered by The Association of Medical Schools for the Suppression of Fraudulent Diplomas. Such a reward should not equal the value of the plate from which a diploma is printed, however, lest the reward itself became an inducement to the establishment of such schools.

The repeated discoveries of bogus diplomas are not entirely devoid of comfort. A thing must have a value to make counterfeiting pay; nobody will take pains to forge a worthless name. Surely then the day is passing away when natural gifts are considered the highest claim to medical skill. But surely also the laws which permit so easily the establishment of such an institution need mending, or at least most careful watching in their execution.

◆

DR. OLIVER WENDELL HOLMES' FAREWELL LECTURE AT THE HARVARD MEDICAL SCHOOL.

Dr. Holmes delivered a farewell lecture, at their request, before the students of the Harvard Medical School on Tuesday, November 28th, which we have the pleasure of giving the readers of the Journal in our present issue, from the author's manuscript as revised by himself. The last lecture upon anatomy by the former Parkman Professor had been delivered some days previously, but the students being unwilling to part from their teacher so easily, and wishing some suitable occasion to express their sentiments, had requested the privilege of hearing Dr. Holmes once more in a more formal farewell.

The lecture room was crowded with the students of the different classes, and the lecturer was surrounded by his former colleagues and a number of the physicians of this city.

Before the lecture stand was a large basket of choice flowers, presented by the third-year students. A photographer stood ready to take the scene before the commencement of the lecture, which was delayed some moments after Dr. Holmes' entrance by this and by a prolonged and enthusiastic greeting from his audience.

The applause having subsided, a member of the first-year's class came forward bearing a very handsome Loving Cup in silver, which he presented to Dr. Holmes on behalf of his classmates in the following words: —

"It is with deep regret that we come to this farewell. We had hoped, when we entered upon our course, to be permitted to listen to your lectures throughout the year. But we are thankful that we have enjoyed that privilege at all.

"Desiring to express our regard in some form more tangible than mere words, we beg you to accept this loving cup. As you may look upon it we hope you will sometimes remember us, as we shall always remember you.

"We bid you farewell in the words inscribed on the cup, 'Love bless thee, joy crown thee, God speed thy career.'"

Dr. Holmes was evidently much moved, and expressed his thanks in a few brief words.

The following letter was subsequently written by him to the donors: —

My Friends, lately My Pupils, — Your beautiful gift was so complete a surprise to me that it produced a sudden attack of speechlessness; I lost my whole vocabulary of gratitude. But I feel sure that you did not mistake *aphasia* for *acardia*. My heart was in its right place, though my tongue forgot its office. It throbs warmly as I thank you for this precious and lasting token of your kind feelings towards me. The cup seemed empty to those who looked into its glittering hollow, but it was full for me of a richer cordial than the wine-presses of royal vineyards could express, than the alembics of the Grande Chartreuse could distil.

This gift, of priceless value to me and to those who come after me, will meet upon my sideboard, another and a similar one, of ancient date, which has come down to me as an heirloom in the fifth generation from its original owner. The silver teapot which serves the temperate needs of my noontide refection has engraved upon it, as part of its armorial bearings, three nodules supposed to represent the mineral suggesting the name of the recipient; the three words *Ex dono Pupillorum;* and the date 1738. This piece of silver was given by his Harvard College pupils to the famous Tutor, Henry Flynt, whose term of service, fifty-five years, from 1699 to 1754, is the longest on the College Record. Tutor Flynt was a bachelor, and this memorial-gift passed after his death to his niece, Dorothy Quincy, who did me the high honor of becoming my great-grandmother. Through her daughter and her daughter's daughter it came down to me, and has always been held by me as the most loved and venerated relic which time has bequeathed me. It will never lose its hold on my affections, for it is associated with my earliest and dearest remembrances.

But this Loving Cup, which comes to me not by descent, but as a testimony that my own life as a teacher has not been unvalued, but thought deserving of such an enduring memorial, must hereafter claim an equal place in my affections with the most prized and cherished of all my household possessions. I hope that when another hundred and fifty years have passed away, some descendant of mine will say as he lifts this cup and reads the name it bears: "He, too, loved his labor and those for whom he labored, and the students of the long past nineteenth century remembered their old teacher as kindly, as gracefully, as generously, as the youth of the earlier eighteenth century remembered old Father Flynt, the Patriarch of all our Harvard Tutors."

Farewell, my dear young friends, and may the blessings I invoked for one whom I loved, and which you have asked for me in my own words, engraved upon this cup, be upon each and all of you in the path you are entering, until it ends at the open portals of a brighter and happier world!

Faithfully and affectionately,
Your friend and late instructor,
Oliver Wendell Holmes.[1]

December 1, 1882.

---

[1] The following note was sent to the gentlemen who presented the large basket of flowers, placed before the desk: —

296 Beacon Street, *December* 2, 1882.

My Friends, once My Pupils, — If I did not properly acknowledge the beautiful floral tribute which was placed before me as I stood for the last time in my lecture room, I know you will not set down my seeming negligence as ingratitude. The truth is that I was surprised out of my self-possession, and could not find the proper expressions to tell you how much I was touched by this evidence of your kind feeling. I had come unprepared for such a reception as I met with, and though it needs few words to show a heart filled with grateful emotion, even those few words found but imperfect utterance in my stammering accents.

Please to accept my warm thanks, now that the flowers have faded, with the assurance that for me their hues will never grow pale, and their fragrance never be wasted.

Believe me, my dear young friends, faithfully yours,
Oliver Wendell Holmes.

The lecture which followed was listened to with marked attention and appreciation by those who were fortunate enough to be present, and we are sure that our readers, though losing the charm of his delivery, will enjoy Dr. Holmes' reminiscences of his own medical teachers fifty years ago, illumined by the flashes of his characteristic wit, nearly as much as did his audience.

The occasion was in every way picturesque and marked by good taste, and we may say that some of its features were as gratifying as unexpected to the retiring professor.

We promise ourselves another early opportunity to hear Dr. Holmes speak upon matters connected with medical education, at the approaching opening of the new building of the Harvard Medical School.

The University is about to appoint him Emeritus Professor of Anatomy, and we believe it is not premature to say that he will be requested by his former pupils to sit for his portrait, a request which, if we are not mistaken, has been repeatedly made but not granted before.

◆

THE NEW PHARMACOPŒIA AND THE STRENGTH OF ITS OPIUM PREPARATIONS.

ANYTHING that tends toward accuracy in the administration of drugs possessed in large doses of dangerous properties, should be regarded with favor by the community, but unfortunately the changes necessary to the attainment of such accuracy carry with them certain dangers which need to be carefully guarded against.

Dr. Squibb, with that carefulness for which he is noted, and which has made his name synonymous with accuracy and purity wherever it is found, calls attention to the great increase in strength in the opium preparations of the revised Pharmacopœia of 1880, now just issued.

In his Ephemeris of Materia Medica, Pharmacy, Therapeutics, and Collateral Information, he speaks of the change as a very much needed step in the right direction, but as he failed to realize the extent of the change when reading the proof-sheets, he deems it not improbable that others may overlook the matter, and asks medical journals to draw the attention of the profession to it.

The instructions of the Convention to the Committee of Revision, directed that "in the liquid opium preparations, excepting paregoric, the strength of ten per cent. shall be adopted if found advisable." The recommendation was "found advisable" and adopted, a change which would have made an increase in the strength of laudanum and kindred preparations by about ten per cent., — an increase which would have been attended with marked consequence only to children and particularly susceptible persons; but another and most important factor in the increase of strength remains, namely, the strength, in morphia, of the powdered opium, — a factor not likely to attract the notice of the prescriber unless his attention were drawn to it by the manufacturer.

The Pharmacopœia of 1870 provides that opium when dried at 212° F. until it ceases to lose weight should yield at least 10 per cent. of morphia by the officinal process. A powdered opium slightly above this 10 per cent. standard gives, by the 1870 formulæ, to the officinal tincture a strength of 4 grains of morphia, equivalent to 5.33 grains of crystallized sulphate of morphia, to the fluid ounce.

The Pharmacopœia of 1880 provides that its powdered opium should contain not less than 12 nor more than 16 per cent. of morphine when assayed by the process given under Opium. If the formulæ of the new Pharmacopœia were made from a 12 per cent. powder, laudanum would contain 5.44 grains in each fluid ounce, and if made from a 16 per cent. opium the same preparation would contain 7.25 grains, a difference too great for therapeutic accuracy. Hence Dr. Squibb has adopted a definite intermediate proportion of 6 grains in each fluid ounce, equivalent to 7.5 grains of sulphate of morphia, — and this is an increase of one half over the standard of 1870. It is this possibility of establishing a reliable average strength which makes the new Pharmacopœia more definite than the old.

If the full dose of the old tincture, deodorized tincture, or compound solution of opium be considered 24 minims or 38 drops, representing a quarter of a grain of sulphate of morphia, the corresponding dose of the new preparation would be two thirds only of the former dose, or 16 minims, or say 25 drops.

Dr. Squibb proposes the use of the figures "1870" or "1880" for the present by physicians in their prescriptions annexed to preparations of opium. It should also be appended to druggists' labels in supplying the corresponding articles.

◆

THE PROHIBITION OF PUBLIC FUNERALS AFTER DEATH FROM A CONTAGIOUS DISEASE.

THE Board of Health of Boston has issued an order forbidding public funerals where death has resulted from small-pox, diphtheria, scarlet fever, and typhus fever. The remains of persons dying from either of these diseases must be placed in a properly sealed receptacle as soon as possible after death, and not be disturbed thereafter except for burial. The apartments and surroundings of the deceased are to be, as hitherto, fumigated and disinfected, and the Board urgently advises, where death has occurred from either of the above diseases, that no persons other than those employed in this operation, and those whose duty it is to prepare and remove such bodies for burial, should enter the room or apartment where such a death has occurred or such a dead body lies until after the removal of the body and the completion of the disinfection of the rooms.

This order is an eminently proper one, and, though likely at first to encounter some opposition from ignorant and prejudiced portions of the community, will undoubtedly be generally enforced, and will eventually command the assent and even the support of those who at first might be disposed to resist or evade its execution.

No law of nature, no sentiment, and no respect for the departed demand that the living should endanger their own lives and the health of the community in paying homage to the dead. The danger of contagion from the bodies and surroundings of those dying from small-pox, scarlet fever, or typhus fever is undoubted; in regard to diphtheria inquiries show that the question may be considered an open one. But in such a matter it is right, where there is any doubt, to choose the safe side.

The liberty of contracting contagious diseases is one which the great mass of our people is sufficiently sensible to be willing to renounce, and we think contagious diseases ordinances might readily be made more stringent in others of our large cities.

◆

MR. HOADLEY'S RESIGNATION FROM THE MASSACHUSETTS BOARD OF HEALTH, LUNACY, AND CHARITY.

THE resignation of Mr. J. C. Hoadley takes from the State Board of Health, Lunacy, and Charity one of its most accomplished members, and deprives the State of the services of a highly intelligent, conscientious, and valuable officer. Mr. Hoadley, then a distinguished civil engineer, was appointed to the State Board of Health in 1873. He has remained, since the resignations of Dr. Bowditch, Dr. Folsom, and Mr. David L. Webster, for more than a year the only one of those formerly constituting the working force of the State Board of Health, who has also followed its declining fortunes in the hybrid Board of Health, Lunacy, and Charity. His labors helped to establish sanitary science as a practical aid in promoting the health of the people in Massachusetts and indirectly throughout the country, and his departure from public office reminds us again how far down the public health department has dropped in this State since the fear of our governor-elect drove a frightened legislature into following the unwise directions of a politic governor. Mr. Hoadley deserves the genuine thanks of the community for his faithful and fruitful work. His successor, Mr. Fallon, formerly superintendent of a large mill in Lawrence, has been successful in his own business; what his special knowledge of health, lunacy, or public charities, may be we do not know, but trust he possesses suitable qualifications for a place which demands high attainments and large experience, such as to make his selection as Mr. Hoadley's successor, an especially judicious one.

◆

THE WARREN TRIENNIAL PRIZE.

THE advertisement of the subject and provisions for the award of this very liberal prize, to which editorial reference was made in the last number of the JOURNAL, was accidentally omitted from that issue. For information in regard to the terms of the prize readers are referred to the announcement on the second page of the cover of this issue.

MEDICAL NOTES.

— Dr. Thomas Dwight, former professor of anatomy at Bowdoin College, and grandson of Dr. John C. Warren, the predecessor of Dr. Holmes, will deliver the lectures on anatomy at the Harvard Medical School this winter.

— Dr. A. V. Macan has been appointed Master of the Rotunda Lying-In Hospital, Dublin, to succeed Dr. Lombe Atthill.

— Dr. Wm. B. Carpenter, of England, lectured in Tremont Temple on Sunday last upon the Physiology of Alcohol. The lecture occurred as one of a series of temperance meetings, and was presided over by Governor Long. The speaker started with the thesis that alcohol is a poison, although in many cases a very slow one. The different points at which this toxic influence is exerted were enumerated in order, beginning with the gastric digestion, which is impaired by depravation of the digestive fluid. The composition of the blood was then alluded to, and the speaker claimed that the introduction of a new constituent (alcohol) into the menstruum of the blood, which should consist almost entirely of water, impaired the nutrient functions of that fluid. He next referred to the vaso-motor system, and showed that the relaxing effect upon the arterioles, which causes the feeling of warmth after taking alcohol, quickly gives rise to a radiation of heat and a feeling of depression and cold. Finally it interfered with the perfect action of the emunctories of the body. The speaker closed with facts in proof of his statements, taken from cases within his own knowledge.

— The Garfield Board of Audit have allowed the following claims for professional services: Dr. D. W. Bliss, $6500; Dr. D. H. Agnew, $5000; Dr. Frank H. Hamilton, $5000; Dr. Robert Reyburn, $4000; Dr. Silas A. Boynton, $4000; Dr. Susan A. Edson, $3000; total, $27,500. This is $8000 less than the amount especially appropriated for physicians and medical attendance.

— The annual meeting of the West Side Relief Association and Seaside Sanitarium was held November 1st; when it was announced that during the year the Society had expended $8258.98, of which $1000 was presented by the *New York World*. Between April 7th and September 30th, 2780 mothers and children were accommodated at the sanitarium for from one to three weeks, and 2716 mothers and children for one day. Fifteen thousand two hundred free baths were given, 51,400 meals furnished, and 1050 medical visits made by the physicians in charge, who made up 650 prescriptions, all free of charge to the beneficiaries of the institution.

— Can there be a criminal abortion when there is no pregnancy? Chicago is discussing this question as the result of the recent death of a girl from peritonitis, due to manipulation with the intent to procure abortion. Autopsy showed that she was not pregnant. Can the abortionist be made to suffer the penalty for her death when he can bring evidence from the post mortem that in this case at least he was *not* an abortionist?

Miscellany.

A PROPOSED CHANGE IN THE METHOD OF EXAMINING CANDIDATES FOR THE MASSACHUSETTS MEDICAL SOCIETY.

Mr. Editor, — The article which appeared in your last issue, entitled A Proposed Change in the Method of Examining Candidates for the Massachusetts Medical Society, is so grossly misleading, and contains such unjust imputations against the Suffolk District Board of Censors, that I cannot let it pass uncorrected.

The Suffolk Censors have only endeavored to secure uniformity of methods and a proper degree of uniformity of standards, as well as a proper observance of By-Law I. of the Society. They have never desired anything more than this, and Dr. Williams' assumption that they urged any such unpractical change in the methods of examination as he imputes to them is entirely gratuitous, and can only arise from ignorance of the true facts of the case. If the chairman of the Norfolk Board had accepted the *invitation* to be present at the general Censors meeting, held November 17, 1881, as did other members of the Norfolk Board, he would have learned the true attitude of not only the Suffolk Censors, but of several of the Norfolk Board and many other boards who are advocates of at least a nominal observance of the by-law relating to admission of candidates.

The reason for the action of the Suffolk Censors was that it came to their knowledge that in many districts hardly any of the requirements of By-Law I. were fulfilled. They believed this to be detrimental to the interests of the Society, and endeavored to bring about a general meeting of the Censors for the sake of comparing notes and methods. They also desired to have By-Law I. stripped of its obsolete requirements in order that it might become a living entity cacapable of literal construction by the various boards.

That Dr. Williams has only given the By-Laws of the Society a superficial thought is shown by his labored argument to prove a written examination bad and unnecessary, and crediting the Suffolk Censors with a desire to introduce this *change* in the methods of examination, when for some years By-Law I. has read: "And shall satisfy the Censors . . . by a further examination, a part of which *shall* be in writing, that he has an adequate knowledge of anatomy, pathological anatomy," etc.

The Suffolk Censors have never taken a single step looking to the invasion of district rights. They recognize and value the liberty the By-Laws give to each board, to determine what may be an adequate amount of knowledge, necessary in any community, making one thing more important than another as the case may be, but they do not believe in the right of any board to arrogate to themselves the decision as to which ones, or perchance none at all, of the *requirements* of By-Law I. shall be fulfilled.

Any one interested in the true attitude of the Suffolk Censors can learn it by consulting the records of the General Censors Meeting,[1] or by reading the appended petition addressed to the Council by them: —

"The Censors of Suffolk District Society and of the Society at large desire to call the attention of the Councilors of the Massachusetts Medical Society to the need of greater uniformity in the examination of candidates for membership.

"As the Society was originally framed it was the intention and practice that admission be granted only to those who were found qualified according to standards fixed by the Society, but since the subdivision into many District Societies, with Boards of Censors having independent powers for interpretation of their duties, a lack of uniformity in enforcing the requirements has arisen. On inquiry, made of the secretaries of the seventeen Boards of Censors, it was found that while a thorough examination was enforced by some boards, by others scarcely any attempt was made to examine candidates. Some of the members of the boards were not aware that a degree or its equivalent was necessary for membership.

"As an illustration of the confusion caused by this lack of uniformity of examination, the instance may be mentioned, reported to have occurred recently. A practitioner was rejected as a candidate to fellowship by a board of censors; he shortly afterwards changed his residence to a neighboring district, was there admitted by the board, then returned to practice in the first district with full membership among those who had previously considered him unworthy of fellowship.

"At an informal meeting of censors from different boards, held during the annual meeting of the Society, the matter was discussed, and it was the opinion of those present that some action was desirable. On examination of the Society's Transactions it appeared that such action belonged to the Fellows and Councilors and not to the Censors, whose powers are confined within their own districts, and are insufficient to enforce general action throughout the State.

"As it seems desirable that a uniformly good standard of admission to the Massachusetts Medical Society should be maintained, so that a certificate of membership may be a guarantee to the public of a certain excellence in medical skill, the Censors petition the Council to take some action on this subject at their earliest convenience."

Yours very truly, H. C. Haven,
Secretary Suffolk Board of Censors.

SOME HOMŒOPATHIC AND ISOPATHIC MEDICINES.

Mr. Editor, — Hager, in his Pharmacopœia Homœopathica Nova, mentions among others the following remedies, whose names and origins we, however, think it best to give in Latin; the mere thought that such things are used in homœopathy is enough to produce nausea. Here are some of the dainties: —

Albinum. Græcum album. Excrementa alba sicca canum alvo astricta ægrotantium.

Alveolinum. Materia purulenta ex alveolo dentis hominis exempta.

Aranea diademas. Seu Epeira diadema, insectum e familia Araneoidium. Aranea quæ ad justam magnitudinem pervenit, *vivens*, abdomine subgloboso e rubro fusco et cruce e flavo albida punctata (mensibus Augusto et Septembri capta).

Ascaridinum. Ascaris vermicularis, vermiculis intestinalis ex ordine Nematoideorum (Enthelmintium). In stercore recente humano, præsertim infantium, sæpe reperitur.

Balanorrhinum. Liquor mucilaginosus qui in balanorrhœa e glandulis glandis penis secernitur.

---

[1] Vide this Journal, vol. cv., No. 22, p. 518.

Boviluinum. Liquor mucosus in peste boum e faucibus, naribus, oculis, effluens.

Brossulinum s. Syphilinum Brossulinum; Materia purulenta ulceribus venereis exempta.

Bupodoporinum. Materia purulenta mucosa ex ungulis boum claudicatione epizootica (peste exungulante) ægrotantium exempta.

Carcinominum. Sanies (materia ichorosa) e carcinomate axillæ exempta.

Cariesinum. Materia purulenta, carie ossium desumpta.

Ceruminum. Ceruminum auris. Massa vix fluida, viscosa, recens, quæ a cryptis sebaceis auris secernitur.

Cœnurinum ovium. Hydatis seu vesica in cerebri ventriculo ovium sæpe habitans magnitudine ovi columbi, fovens vermiculos multos rugis transversis et cauda biseta, vesica adnatos.

Condylominum. Condyloma totum, ope cultri vel forficulæ recens a corpore humanum discissum.

Coryzinum hominum. Liquor albidus membrana mucosa narium catarrho (coryza) affecta secretus.

Dakryadæ syringium. Materia mucosa e fistula lacrymali exstillans.

Dysenterium. Materia mucosa in dysenteria per anum secreta.

Empyemium. Materia purulenta vomicarum pulmonum.

Enteropurinum. Pus ichosorum in enterochelcosi ex alvo secretum.

Enterosyringinum. Fistula ani.

Galactoplacinum. Massæ crustæ lacteæ infantum.

Glossolentorinum. Massa recens mucosa alba, albida, flava vel fusca, in lingua ægroti hominis insidens.

Gonorrhinum. Liquor spermaticus, lacteo albidus, spissiusculus, pollutione nocturna per urethram ejaculatus. Ne muco gonorrhœic permutetur.

Helinum. Massa callosa indurata gemursæ in digitis pedum hominum.

Hydrophobinum. Spuma vel saliva, quæ ante os hominum aut animalium hydrophobia ægrotantium collecta reperiuntur.

Influenzinum. Mucus secretus a membranis pituitariis hominum influenza epidemica ægrotantium.

Karkinium. Discernunt Karkinium glandis penis, labiorum, nasi, uteri. Pus ichorosum vel sanies e carcinomatibus illis exempta.

Laryngophthisinum. Materia pituitosa trachearum in phthisi tracheali secreta.

Leucorrhinum. Fluor albus. Materia pituitosa in leucorrhœa ex vagina evadens.

Lippitudinum. Liquor pituitosus in lippitudine ex oculis hominum evadens.

Lumbricinum. Ascaris lumbricoides L. vermis intestinalis ex ordine Nematoideorum (Enthelmintium), sæpe per anum, nec non per os hominum exiens. . . . Vermis totus vivus.

Maculahepatinum. Cuticula recens maculæ hepaticæ aut sponte soluta aut scapello subsecta.

Mastocarcinominum. Sanies e cancre mammarum.

Medorrhinum. Materia mucosa in gonorrhœa syphilitica ex urethra evadens.

Meletinum. Materia nigra in vomitu cruento ejecta.

Metrorrhaginum. Sanguis in metrorrhagia ex utero effluens.

Millepes. . . . Insectum vivens.

Morbillinum. Substantia epidermidis farinacea vel squamatim abscedens in stadio desquamationis morbillorum.

Naja tripudians, s. *Coluber Naja.* Anguis magna e familia Viperarum. . . . Mucus venenosus dentium venenatorum.

Nephraposteminum. Sanies abscessûs renum (apostematis renum).

Nephrolitinum. Calculi renales, concretiones in nephrolithiasi exortæ.

Odontonecrosinum. Dens necrosi (carie sicca) ex parte corruptus.

Odontosyringinum. Materia purulenta in fistula dentaria.

Otorrhinum hominum. Liquor purulentus effluens ex auribus hominum.

Pneumophthisinum. Materia purulenta tussi excreta in phthisi purulenta.

Scarlatinum. Squamulæ in stadio desquamationis febris scarlatina ex cute decedentes.

Scrophulinum. Materia purulenta ex ulcere scrophuloso.

Tænium. Tænia lata s. vulgaris et T. solium s. cucurbitana, vermes intestinales classis Enthelminthorum, ordinis Cestoideorum; insignes; corporibus planiusculis geniculatis, oribus quadrilopis. Vermis recens vivus vel frustula corporis ejusdem.

Yours, etc., C. St.

A QUACK'S DIAGNOSIS.

The following ingenious diagnosis is copied from a letter written by a well-known quack to a patient: —

There exists in your system a little germ parasite, known as bacteria fungi (a little insect a fraction smaller than the trichinæ in pork), in large quantity in the pit of the stomach, causing voracious appetite and generating heat, feeds up the "elementary" canal to the bronchioles and nasal passages, from the throat passes to the base of the brain, and there feeds on the nerves and muscles, boring into them and honeycombing them, finds its way down the spine to the kidneys and seminal ducts and mucous membrane of the bowels. There is also a great amount of uric acid in your system. This becomes heated, fills the indentures and perforations made by this parasite, and causes the unbearable sensations you have. It is my opinion you are literally filled with these infinitesimal creatures, and are being slowly eaten up through the process of consumption of mucous membranes and destruction of nervous tissue. At times they will concentrate in the bowels just below the stomach. This causes a great appetite, and when they feed elsewhere that feeling is not so great. It produces an abnormal condition of the bowels so as to color the urine. It is also a question whether you can tell me when the back part of your tongue was clean, — that is, for a long time. You need a course of treatment to destroy and eradicate this germ. In my opinion you need four months of thorough treatment.

TRAUMATIC ANEURISM.

Mr. Editor, — In the number of the Journal for November 30th is mentioned a case of traumatic aneurism of the radial artery treated by me. Dr. M. H. Richardson, the reporter, is in error in stating that the artery was tied only on the proximal side of the aneurism; it was tied on both sides. Very respectfully yours, John Homans, M. D.

Boston, *December* 1, 1882.

Suffolk District Medical Society. The Section for Clinical Medicine, Pathology, and Hygiene will meet at 19 Boylston Place, on Wednesday evening, December 13th, at 7.45 o'clock. Dr. Morton Prince will present a paper on The Typhoid Epidemics of the last Decade and the Necessity of Compulsory Disinfection. In connection with the above Mr. E. W. Bowditch will speak upon The Siphoning of Sewer Traps in relation to Typhoid Fever; and also upon the Sanitary Results of the Recent Improved System of Sewage at Nahant, Mass. Representatives from the State Board of Health, from the Boston Board of Health, the City Physician, and others are expected to take part in the discussion.

Albert N Blodgett,
Secretary.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 25, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhœal Diseases.
New York	1,206,590	553	195	17.90	15.73	7.05	1.08	3.07
Philadelphia	846,984	349	107	18.12	—	13.72	1.14	.29
Brooklyn	566,689	224	81	23.19	14.61	9.37	1.24	9.37
Chicago	503,304	178	76	36.40	15.72	11.76	6.16	2.80
Boston	362,535	166	37	17.47	14.46	9.64	2.41	2.41
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	157	76	43.13	5.09	20.38	.64	4.46
Cincinnati	255,708	93	34	19.38	17.21	6.45	2.15	1.08
New Orleans	216,140	121	34	14.88	8.26	—	—	6.01
District of Columbia	177,638	58	26	13.79	—	6.90	1.72	1.72
Pittsburg	156,381	71	24	30.98	16.90	11.27	11.27	2.82
Buffalo	155,137	80	25	41.25	3.75	19.75	7.50	
Milwaukee	115,578	42	22	14.28	7.14	9.52	—	2.38
Providence	104,857	62	9	32.26	8.06	6.45	22.58	—
New Haven	62,882	23	7	21.74	13.04	13.04	4.35	—
Charleston	49,999	41	10	24.39	7.32	14.63	4.88	—
Nashville	43,461	25	8	12.00	4.00	4.00	4.00	—
Lowell	59,485	11	—	9.09	36.36	9.09	—	—
Worcester	58,295	13	5	14.38	7.69	—	—	—
Cambridge	52,740	14	3	57.14	7.14	21.45	—	14.28
Fall River	49,006	28	11	35.71	14.28	4.14	—	21.42
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	12	4	16.66	—	16.66	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	6	—	—	—	—	—	—
New Bedford	26,875	8	—	—	—	—	—	—
Somerville	24,985	12	2	33.33	—	25.00	—	—
Holyoke	21,851	14	6	57.14	7.14	28.57	7.14	—
Chelsea	21,785	7	2	28.56	1.43	1.43	—	—
Taunton	21,213	4	0	25.00	—	—	25.00	—
Gloucester	19,329	5	2	40.00	20.00	40.00	—	—
Haverhill	18,475	3	1	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	9	3	66.66	11.11	66.66	—	—
Newburyport	13,537	5	2	40.00	—	40.00	—	—
Fitchburg	12,405	4	1	—	—	—	—	—
Malden	12,017	6	3	—	—	—	—	—
Seventeen Massachusetts towns	128,128	33	6	39.39	—	18.18	3.03	3.03

Deaths reported 2437 (no report from St. Louis): under five years of age 822: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 572, consumption 376, lung diseases 251, diphtheria and croup 248, typhoid fever 80, diarrhœal diseases 62, scarlet fever 62, malarial fevers 38, small-pox 27, whooping-cough 18, cerebro-spinal meningitis 12, puerperal fever 10, measles eight, erysipelas seven. From *scarlet fever*, Brooklyn 12, Chicago 11, Buffalo nine, New York and Cincinnati seven each, Philadelphia six, Baltimore four, Boston three, Providence two, District of Columbia and Milwaukee one each. From *malarial fevers*, New York 12, New Orleans eight, Brooklyn six, Chicago three, Baltimore and Charleston two each, Cincinnati, New Haven, Nashville, and North Adams one each. From *small-pox*, Baltimore 18, Philadelphia four, Chicago and Pittsburg two each, New Orleans one. From *whooping-cough*, New York eight, Brooklyn four, Chicago two, Boston, New Orleans, Pittsburg, and Holyoke one each. From *cerebro-spinal meningitis*, New York four, Cambridge three, Buffalo two, Baltimore, Worcester, and Chicopee one each. From *puerperal fever*, Chicago three, New York, Pittsburg, Buffalo, Somerville, Chelsea, North Adams, and Spencer one each. From *measles*, New York five, Chicago, Baltimore, and Fall River one each. From *erysipelas*, Chicago and Holyoke two each, Boston, Cincinnati, and Worcester one each.

One hundred and forty-two cases of small-pox were reported in Baltimore, Pittsburg seven, Cincinnati three; diphtheria 65, scarlet fever 28, typhoid fever 14, in Boston; scarlet fever 24 and diphtheria 29, in Milwaukee.

In 34 cities and towns of Massachusetts, with a population of 829,038 (population of the State 1,783,086), the total death-rate for the week was 18.81 against 17.48 and 19.42, for the previous two weeks.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending November 11th, the death-rate was 21.7. Deaths reported 3522: acute diseases of the respiratory organs (London) 330, scarlet fever 131, measles 101, fever 98, diarrhœa 59, whooping-cough 46, diphtheria 27, small-pox (London four, Wolverhampton and Newcastle one each) six. The death-rates ranged from 12.9 in Brighton to 32.4 in Sunderland; Leicester 15.7; Derby 18.7; Bradford 19.8; London 20; Birmingham 21.5; Nottingham 22.6; Birkenhead 24.1; Leeds 26.8; Liverpool 28.2. In Edinburgh 17.3; Glasgow 24; Dublin 27.7.

For the week ending November 11th, in the Swiss towns, there were 17 deaths from lung diseases, diarrhœal diseases 17, consumption 15, scarlet fever, erysipelas, diphtheria and croup three each, typhoid fever two, measles one. The death-rates were, at Geneva 16.5; Zurich 14.2; Basle 11.4; Berne 29.9.

The meteorological record for the week ending November 25th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
November, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	8.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 19	30.024	27	34	20	70	60	78	69	NW	NW	NW	10	11	11	C	C	C	—	—
Mon., 20	29.910	30	38	23	73	79	88	80	NW	NW	NW	12	13	15	F	C	O	—	—
Tues., 21	29.901	33	44	25	76	48	71	65	NW	SE	SE	9	4	2	C	C	C	—	—
Wed., 22	29.904	35	45	29	77	46	68	64	NW	NW	W	12	10	7	O	C	C	—	—
Thurs., 23	30.042	39	52	28	77	56	73	69	W	S	S	8	6	4	C	F	O	—	—
Fri., 24	29.780	42	54	35	93	49	74	72	S	W	W	9	12	11	O	F	C	—	—
Sat., 25	30.005	34	39	28	61	38	69	56	W	NW	NW	16	20	10	C	C	C	—	—
Means, the week.	29.938	34						68										—	—

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OBITUARY. DR. GEORGE E. MASON.

At a special meeting of the Providence Medical Association, held Friday evening, December 1, 1882, Dr. E. M. Harris presiding, the following minute was presented: —

George Edward Mason, M. D., a member of this Association since 1866, died of double pneumonia on Tuesday, November 28, 1882, in the forty-third year of his age.

We, his associates, do hereby testify our sorrow on learning of his sudden and untimely death in the prime of life, and wish to express our consciousness of his loss and appreciation of his worth, particularly his unusual skill, ability, and genius as a surgeon, his sound, practical judgment as a physician, and his self-sacrificing, sympathetic, and humane character.

Although we have been brought less into personal contact with him for the past few years than formerly, we will ever hold green in our memories the enviable position he held, and the great service he has rendered to so many of his fellow men by his professional skill and devotion.

Be it resolved, That these minutes be recorded and published in the Providence *Journal* and *Press* and the Boston Medical and Surgical Journal, and that a copy be sent to his widow, and that we as a body attend his funeral.

J. W. Mitchell, M. D.,
J. W. C. Ely, M. D., } *Committee.*
H. G. Miller, M. D.,

The above was adopted by the unanimous vote of the Association.

William R. White, M. D., *Secretary.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 17, 1882, TO DECEMBER 1, 1882.

McKee, James C., major and surgeon. Now awaiting orders, is assigned to duty in the Department of California. S. O., paragraph 10, No. 273, A. G. O., November 23, 1882.

Alden, Charles H., major and surgeon. At expiration of present leave to report to the commanding general, Department of Dakota, for assignment to duty. S. O., paragraph 10, No. 273, A. G. O., November 23, 1882.

Bill, Joseph H., major and surgeon. At expiration of present leave to report to the commanding general, Department of the Platte, for assignment to duty. S. O., paragraph 10, No. 273, A. G. O., November 23, 1882.

Munday, Benjamin, first lieutenant and assistant surgeon, will be relieved from duty at Willet's Point, New York, and assigned to duty in the Department of the Columbia. S. O., paragraph 10, No. 273, A. G. O., November 23, 1882.

Barnett, Richards, captain and assistant surgeon. The leave of absence granted November 1, 1882, is extended five months. S. O. paragraph 11, No. 273, A. G. O., November 23, 1882.

Brown, Paul R, assistant surgeon. The leave of absence granted May 25, 1882, is extended six months on surgeon's certificate of disability. S. O., paragraph 7, No. 273, A. G. O., November 23, 1882.

Smith, Andrew K., major and surgeon. At the expiration of his present sick leave will be assigned to duty at Willet's Point, N. Y. S. O., paragraph 10, No. 273, A. G. O., November 23, 1882.

Corson, Joseph K., assistant surgeon, is assigned to duty at Jefferson Barracks, Mo. S. O., paragraph 8, No. 273, A. G. O., November 23, 1882.

Cleary, Peter, J. A., captain and assistant surgeon, now awaiting orders, will report to the commanding general, Department of Dakota, for assignment to duty. S. O., paragraph 10, No. 273, A. G. O., November 23, 1882.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE MARINE HOSPITAL SERVICE. JULY 1, 1882, TO SEPTEMBER 30, 1882.

Hutton, W. H. H., surgeon. To inspect keepers and crews of Life Saving Service. July 11, 1882.

Miller, T. W., surgeon. To inspect keepers and crews of Life Saving Service. August 7, 1882.

Wyman, Walter, surgeon. To inspect keepers and crews of Life Saving Service.

Long, W. H., surgeon. Granted leave of absence for ten days. July 1, 1882. Granted leave of absence for fourteen days. September 16, 1882.

Murray, R. D., surgeon. To proceed to Brownsville, Texas. August 21, 1882.

Purviance, George, surgeon. To inspect keepers and crews of Life Saving Service. July 13 and 18, 1882. To report for temporary duty at Washington. August 23, 1882. To report for temporary duty to Chairman Board of Examiners Revenue Bark Chase, at Norfolk. August 26, 1882.

Smith, Henry, surgeon. Granted leave of absence for thirty days. July 5, 1882.

Fisher, J. C., passed assistant surgeon. To report for temporary duty to Chairman Board of Examiners Revenue Bark Chase, at Norfolk. August 26, 1882.

Irwin, Fairfax, passed assistant surgeon. Granted leave of absence for thirty days. July 28, 1882.

Carter, H. R., passed assistant surgeon. To proceed to Hickman, Ky., for temporary duty. August 10, 1882. To proceed to Memphis, Tenn., for temporary duty. August 12, 1882. To proceed to Little Rock, Devall's Bluff, and Newport, Ark., as inspector. September 16 and 21, 1882.

Porter, F. D., assistant surgeon. To proceed to St. Louis, Mo., for temporary duty. August 21, 1882. To report to Surgeon Sawtelle for examination for promotion. September 1, 1882. To rejoin his station (Chicago) when relieved by Assistant Surgeon Urquhart. September 1, 1882.

Benson, J. A., assistant surgeon. To proceed to Cairo, Ill., for temporary duty. August 12, 1882.

Devan, S. C., assistant surgeon. To join Revenue Steamer Corwin for cruise in Alaskan waters. July 10, 1882.

Urquhart, F. M., assistant surgeon. To proceed to Wilmington, N. C., for temporary duty. July 26, 1882. To proceed to St. Louis, Mo., for temporary duty. September 1, 1882.

PROMOTION.

Porter, F. D., passed assistant surgeon. Promoted and appointed passed assistant surgeon by the Secretary of the Treasury, from October 1, 1882. September 14, 1882.

Original Articles.

TRACHEOTOMY, WITH A REPORT OF THREE CASES.[1]

BY M. H. RICHARDSON, M. D.

The operation of opening the trachea is one of great interest and importance, especially to the young men of the profession, for it is frequently the first difficult operation they are called upon to perform. All who have had any experience with tracheotomy will agree with me, I think, in saying that no other surgical procedure calls for greater skill, coolness, and nerve than this sometimes called minor operation.

The object of this paper is to consider the different methods of performing the operation now in use, to review the anatomy of the anterior cervical region, and finally to discuss a few details of treatment that may arise.

Case I. Annie Waters, six years of age. I was called to see this girl on the morning of October 29, 1876. She had been sick with sore throat for several days, but not confined to the bed. She was breathing noisily, with considerable difficulty. Examination of fauces revealed grayish white patches on tonsils and uvula. Cervical glands enlarged and tender. Constitutional symptoms not marked. There was considerable sinking of epigastrium and intercostal spaces, as well as dilation of the alæ nasi, during inspiration. Some cyanosis of countenance. Diagnosis diphtheritic laryngitis.

The patient was at once removed to the kitchen, which was filled with warm moist air. Some relief was obtained for the most urgent symptoms. In the afternoon of this day, the dyspnœa having become excessive, by the advice and with the aid of Dr. Porter, the trachea was opened just below the cricoid cartilage. Ether had been given for the purpose of keeping the child quiet. The first cut had scarcely been made when breathing ceased entirely, and it became necessary to complete the operation quickly. The parts were rapidly dissected with the blade of the scalpel, the median line being carefully sought, and the trachea was exposed and opened with the greatest ease. After keeping the tracheal wound open with dilators a few moments to allow the escape of bloody mucus, diphtheritic membrane, etc., the canula was introduced and fixed in the usual manner.

In this case the operation was very simple. There were no complications whatever. The trachea was sought for where it lies nearest the surface, and all the structures covering it were cut through. The child made a rapid and complete recovery. She was kept in the kitchen all the time in a warm and moist atmosphere. Stimulants were freely given, and abundant nourishment. She had unremitting care and attention from Drs. Morse and Elliot, at that time medical students, to whose devotion she undoubtedly owes her recovery. The great source of danger to the patient was the clogging of the canula. This was so great that one night it was necessary to remove the whole tube and clear the trachea by means of long forceps and feathers. The tube, which was the ordinary double one, with fenestra, was removed in about two weeks. The wound closed with great rapidity, and the child regained very soon her usual health and voice. I saw her in May last, and she was in perfect health. An irregular cicatrix just below the cricoid cartilage was the only evidence of the operation.

The diagnosis of diphtheria was confirmed a short time after by the severe sickness of Dr. Morse, who contracted diphtheria while in charge of the case.

Case II. One Friday morning in March, 1877, I was called to see H. T., four years of age, a very robust child of English parentage. He had been ailing a few days, but nothing was thought of it till he became "croupy." An examination of the throat gave unmistakable evidence of the diphtheritic process. There was the usual appearance of a sloughing mucous membrane. Laryngeal symptoms existed, but were not severe. The child was at once placed in the kitchen and a washboiler put on the stove. The moistening of the air which followed caused considerable amelioration of the symptoms. In the evening the patient was still breathing with sufficient ease. At about 9.30 that night I was called in great haste, and found the child in much distress. He was breathing with extreme difficulty, and was greatly cyanosed. Tracheotomy was advised at once, and was performed with the assistance of Drs. Haven and Morse. Great difficulty in this case was anticipated. The child had a short and very fat neck. Cyanosis was extreme, and the veins very much distended. The light was very bad. An incision was made from just below the thyroid cartilage about two inches towards the sternum, exposing part of the crico-thyroid membrane, cricoid cartilage, isthmus of the thyroid, etc. Hardly had the operation been begun when the child ceased to breathe. A moment later a large vein was cut which obscured everything. Some time was lost in unsuccessful attempts to tie the bleeding vessel, when it became evident that the trachea must be opened instantly, the child being practically dead.

With the finger as a guide I opened the larynx and trachea from the crico-thyroid membrane down through the isthmus of the thyroid. No bubbling of air followed, the hæmorrhage continued very great. The child was black in the face, and had not inspired any air whatever for at least three minutes. It being impossible to introduce either canula or catheter through this wound, I continued my incision through all the super-lying structures, and the trachea itself in the median line, put in the dilators, introduced a large-sized gum-elastic catheter, and expanded the child's lungs fully. An assistant then compressed the thoracic wall with considerable force. By this means a large amount of blood was expelled from the trachea, and two or three repetitions of the process were followed by natural and successful attempts of the patient to breathe. Meanwhile the bleeding vessel had been ligated by an assistant.

The object of the operation was successfully accomplished. The breathing became perfectly free and quiet. The patient was stimulated and nourished as much as possible. He had constant medical care and supervision by students. The air was kept so moist that the paper fell from the walls. Gauze was kept over the tube (the same kind as in the previous case).

Sunday following the operation a cast of the trachea down to its bifurcation was coughed up and removed. The breathing had been for some hours impeded, in spite of all attempts to keep the trachea clear by means of a long feather. Quiet respiration now continued. On Tuesday, four days after the operation, the child died with symptoms of constitutional infection.

---

[1] Read before the Boston Society for Medical Observation, November 16, 1882.

CASE III. J. H., eleven months old, in the winter of 1877–78, was referred to me, as Dispensary physician, by Dr. Knight. I found a child with the most wretched surroundings in a back alley of Pitts Street. The child had a very large head, almost suggesting hydrocephalus. The anterior fontanelle seemed as large as ever, and the posterior had made no attempts at closing. Moreover, the parietal bones did not meet within half an inch.

The boy was poorly fed and pale. There was great dyspnœa. The mother said it had gradually appeared without apparent cause. The only signs present were a considerable swelling of the cervical glands, especially those on the right side of the neck. These by their mere presence seemed to cause the laryngeal stenosis.

After watching the case a few days, and observing that the symptoms had become aggravated, with the aid of Drs. Cabot and Mixter I opened the trachea. The patient, though poorly nourished, had quite a fat neck. As in the two preceding cases, the administration of ether produced complete asphyxia. After two or three very difficult respirations they ceased entirely, and haste became the main object. The incision was made a little lower than in the preceding case. The tissues were quickly and safely divided through the fascia, which, springing from the deep cervical fascia, investing the thyroid body, descends to the sternum, and forms a covering to the sterno-hyoid and sterno-thyroid muscles. From this point the dissection was carried on by the use of the director and other blunt instruments. The greatest ease was found in exposing the trachea, putting aside the thyroid body and veins so as to show the glistening rings of the trachea. Two enormously dilated veins were found to run side by side anterior to the trachea, in close apposition. These were easily separated. The trachea was found to be very small, barely admitting the smallest-sized tracheal tube, and some little difficulty was experienced in its introduction. Meanwhile the asphyxia had gone on to an extreme degree, and the patient was resuscitated as in Case II., with some difficulty, by means of the gum elastic catheter and compressing the thorax. [In this and in similar cases I have found this method of waking up, so to speak, the suspended respiratory functions of the greatest benefit.] In this operation there was no hæmorrhage, though the difficulties were much greater than in either of the preceding cases.

The patient recovered well from the operation, and is now a large and strong boy. Very little was done in the way of after-treatment. The tube was changed once or twice, and the greatest possible difficulty was had in replacing it, the child becoming at once cyanotic, struggling at its throat, and finally ceasing to breathe. This difficulty in reintroducing the canula I could only account for on the theory of the tube being too large for the trachea, or by the presence of granulation masses, which, filling the tracheal wound, became partially detached on attempts to introduce the canula. After remaining about six months the tube was withdrawn permanently. There was some difficulty at first in reëstablishing laryngeal respiration, as some of the original stridor still existed, but this gradually subsided. In May of this year I saw the boy, and found him a very strong and robust child, with a slight scar in the neck as the only relic of his original disease.

A *résumé* of these cases suggests two or three points directly connected with the anatomy and surgery of this operation, and one or two interesting topics for discussion concerning methods of after-treatment.

(1.) METHOD OF OPERATING.

The common method of performing tracheotomy among modern surgeons is to make an incision from the cricoid cartilage down towards the sternum about two inches, the child lying on its back with the neck raised on a pillow and the head extended. The point of election is about half an inch below the cricoid cartilage, and below the isthmus of the thyroid. If possible a careful or, if necessary, a rapid dissection may be made through the soft parts covering the trachea. A hook may be used to draw the trachea forward for incision if it is deeply placed. Otherwise it may be opened with the index finger as guide. Bleeding arteries should be tied; veins will stop bleeding with the relief of asphyxia by the first few inspirations. (Bryant.)

ROSE'S METHOD.

Among the modifications of the ordinary method is that in the position of Rose, in which the head is allowed to hang down over the end of the table at right angles to the body.

Punier[1] reports one hundred and one cases of tracheotomy for diphtheria, in which the predilection was in favor of operating with the head hanging.

Wolff[2] recommends this position, and says that the increase in the amount of hæmorrhage due to this position is very slight.

Pfeil-Schneider, without knowing of Wolff's paper, came to a similar conclusion, and recommended the position because the field is well illuminated, the trachea is well drawn out, and especially because blood does not enter the lungs.

Dr. Bradford reports a case[3] in which he performed the operation in this method, in which there was no difficulty beyond the unusual position.

I have had no experience in tracheotomy by this method, but I have seen several operations about the tongue and jaws in which the respiratory passages were kept perfectly free from hæmorrhage by this method. The respiration was somewhat labored, and in a case of laryngeal obstruction I should expect serious difficulty in the child's breathing.

THERMO-CAUTERY.

Dr. J. Boekel[4] reports twenty cases of tracheotomy. He prefers the use of the thermo-cautery to that of the knife where he can choose his own time of operating. In twenty-one cases there were twelve recoveries and nine deaths. There was no hæmorrhage in eighteen out of twenty cases. The thyroid body was divided without hæmorrhage with the instrument at incandescence. He claims as advantage the possibility of dividing the thyroid body without hæmorrhage, and that it is therefore unnecessary to draw the isthmus up or down. The trachea can thus be opened at its most superficial portion (that is, directly under the thyroid isthmus), and therefore at the point of the greatest security. Secondary hæmorrhage did not occur. In four cases where it became necessary to complete the operation with the bistoury, hæmorrhage was so profuse as to give him great anxiety. In two of these cases the hæmorrhage occurred before opening the trachea, and in two the blood seemed to come from the tracheal mucous membrane.

---

[1] In Deut. Zeit. für Chirurgie, xiv.

[2] Volkmann's Samm. klin. Vort.

[3] Archives of Laryngology, vol. i., No. 2.

[4] Archives of Laryngology, vol. i., p. 205.

Berger's communication before the Chirurgical Society of Paris on the use of the galvano-cautery was followed by a great difference of opinion, the majority being apparently against its use.

M. Anger reports a case of tracheotomy by the galvano-cautery which had been used down to the trachea, when a bistoury was used.[1]

ISTHMUS OF THE THYROID.

There has been a great difference of opinion as to the point of election with regard to this structure. Bryant recommends that the isthmus be pushed upwards, that the incision be made below the isthmus, though it may be disregarded in infants.

Parker, in the *Lancet*, 1878, recommends the high operation, and in his book on Tracheotomy in Laryngeal Diphtheria advises the performance of the high operation. Sometimes the cricoid may be cut.

Foulis[2] refers to Bryant, Erichsen, and other authorities as saying that the isthmus of the thyroid may be cut without danger of hæmorrhage. He quotes Hyrtl that there is no anastomosis between opposite sides of the thyroid gland. Foulis mentions cases in which the operation had been done too high up, namely, one in which the tube had been pushed into the larynx at the base of the epiglottis, and one in which the tube had gone into the pouch of Morgagni. In other cases it had been too low down, getting into the thyroid plexus of veins, the occasional *thyroidea ima* artery, or even the innominate vein itself. He therefore selects the isthmus itself as best and safest. Begin, therefore, at the crico-thyroid membrane and go downwards as far as necessary.

Dr. Porter, in the discussion of Dr. Bradford's paper, considers the isthmus of the thyroid a *surgical bugbear*, and has repeatedly torn it with a director.

Holden, in the Landmarks, recommends incising the cricoid and pushing down the isthmus.

TRACHEOTOMY IN ONE STROKE.

Saint-Germain reports, in the *Gazette des Hôpitaux*, two hundred and twenty-seven operations. He completes the operation in one stroke. The knife is introduced into the trachea through the crico-thyroid membrane, and by an outward stroke all the tissues are divided at once.

ANATOMY OF THE ANTERIOR SURGICAL REGION.

The most important anatomical points to be borne in mind in this operation are, first, the external landmarks of the neck. The thyroid and cricoid cartilages can be made out distinctly even in fat-necked children. The lobes of the thyroid can be felt on either side. It should be borne in mind that the cricoid cartilage is much nearer the sternum than one would suppose. When the head is in the erect position the distance is barely an inch and a half in a person of ordinary height. By extension three quarters of an inch may be gained. There are generally not more than seven or eight rings of the trachea above the sternum. The second, third, and fourth are covered by the isthmus of the thyroid. The trachea recedes from the surface rapidly as it descends, so that in a short, fat-necked adult it is an inch and a half below the skin.[3] In a child of three the trachea lies one fourth of an inch beneath the skin, at the upper level of the isthmus, about at the first ring; three centimetres (four fifths inches) below this, in the same child, we come to the level of the clavicle, and find the trachea to be at a depth of eleven sixteenths of an inch, and covered over in front by the thymus gland (measured from Dr. Dwight's frozen sections). The other important structures are the median line separating the sterno-hyoid and thyroid muscles, thyrodean veins, and the outlying vessels. The deep cervical fascia has an important bearing on this operation (first suggested by Dr. A. T. Cabot) when it is performed below the isthmus of the thyroid.[4] Passing forwards from the anterior border of the trapezius muscle, under the platysma, it invests the sterno-cleido-mastoid, and forms a membranous covering for the anterior triangle. In front it is attached to the hyoid bone, invests the thyroid body, and then splits as it descends to become attached to the sternum, the superficial layer to the anterior border, and the deep to the posterior border of that bone, having closely invested the sterno-hyoid and thyroid bodies (Quain). In the sub-thyroidean operation this fascia is of considerable importance. On arriving at the septum between the sterno-hyoid and thyroid muscles attempts to tear apart these muscles will be unsuccessful until this fascia has been divided with the knife. Having done this it will be very easy to complete with the director a bloodless dissection to the tracheal rings.

It must be borne in mind, also, that a plexus of veins invests the thyroid body, those of the opposite sides communicating by small branches across the trachea. From this plexus the blood unites to form the two inferior thyroid veins, which descend on either side of the trachea to join the corresponding brachio-cephalic veins. That on the left side lies more closely upon them than the right, which diverges somewhat (Quain). It is from these veins that the most dangèrous hæmorrhage comes. They are wounded when the incision is made through the tracheal rings — at the most unfortunate time. If possible, therefore, the trachea should not be incised until its pink-white surface is distinctly apparent between the separated veins.

There remain to be mentioned a few variations from the normal arrangement of the parts.

The left innominate vein may be placed unusually high up.

Punier, already quoted, noticed in one hundred and one cases but one vascular anomaly — a carotid artery ascending on the right side of the trachea.

MacIlwain, quoted by Erichsen, has seen the innominate cross the trachea just where the operation ought to be performed.

Bellamy, in a foot-note to his translation of Braune, mentioned a case of a man of sixty, in whom he found the innominate artery running across the isthmus.

Symington,[5] in an article on the anatomical relations of the trachea in a child, describes a mesial section through trachea of frozen child two years old. He first observed the increasing distance from the surface as the trachea descended, being one half inch deep just below level of the cricoid, one inch where it was crossed by the innominate, and one and one half inch at level of upper border of manubrium. The isthmus of the thyroid extends downwards from the cricoid one half inch, lying in front of the upper five rings of the trachea. The thymus gland extends from lower border of thyroid downwards to pericardium.

---

[1] Gazette Medicale.

[2] Some Points in Tracheotomy, Glasgow Medical Journal.

[3] Holden's Landmarks.

[4] Since writing this my attention has been called to an article by Pilcher (Annals of Anatomy and Surgery, 1881), in which the relations of this anatomical structure are fully considered, and its importance in tracheotomy carefully pointed out.

[5] Symington, in Edinburgh Medical Journal.

The innominate artery and lower innominate vein lie in front of the trachea. The artery is only one half inch below the isthmus of the thyroid, and in close apposition to the trachea. The vein is lower, under the manubrium sterni.[1]

Symington disapproves of the low operation except in the hands of good anatomists and experienced surgeons. Others should keep above the isthmus. He quotes Spence and Joseph Bell as in favor of the low operation, and Chiene in favor of the high.

USES OF MOIST AIR.

In the first two cases reported the patient was kept in a warm and moist atmosphere. The first case seemed to be very much benefited by it. I have since thought that in the second case the treatment was overdone. The room was kept so moist that the paper fell from the walls. The child was in a state of uninterrupted perspiration, and it seems to me now that he was injured to some extent. In other varieties of laryngostenosis, especially in the spasmodic croup, I have found direct inhalations of the spray from the steam atomizer give immediate relief. In the third case the larynx and trachea being healthy, only moist gauze was used.

In this method of after-treatment I find a great difference of opinion. Parker praises moist air, and uses a canopy over the bed for the purpose of confining the steam. The amount of moisture depends on the amount of tracheal secretion. The less secretion the more steam. Punier praises the use of warm steam in cases of tracheotomy for diphtheria.

On the other hand Foulis does not believe that the child is benefited by having a damp fog playing over him all the time.

ANÆSTHESIA.

There is one other point upon which I find very little said or written, which seems, nevertheless, a very important one — the effect of ether on the larynx. In all the cases reported the effect of the anæsthetic was to produce complete stenosis. This may have been due in part to the extension of the head just before making the first incision. Cases are reported where ether or chloroform may cause spasm of the glottis. Mr. House, in Guy's Hospital Reports, gives a case in which spasm of the glottis occurred from inhalation of chloroform prior to an operation for stricture of the urethra. At the next attempt ether was used with the same result. Tracheotomy had to be done in each case. I have seen the same thing happen in etherization of a patient with bronchocele, where death was averted by opening the trachea through the tumor.

Parker says an anæsthetic may safely be given.

Erichsen believes that it may be given always except in cases of extreme syncopal asphyxia. The laryngeal inflammation and obstruction is associated with so much spasm that he thinks the breathing is easier with an anæsthetic than without it. Holmes says there is no objection to the use of chloroform.

In my cases I have been, perhaps, unfortunate in the use of ether. In spite of my experience with it, I should make further trial with it.

I quote Dr. John Homans, who says that he would rather not use ether in a case of severe asphyxia, but would prefer the disadvantage of a struggling patient to the chance of being obliged to hurry through the operation.

CASES OF EXTREME EARLY AGE.

There is one other point worthy of remark in the cases reported — the age of the third case. The child at the time of the operation was eleven months. It is so rare for recovery to follow tracheotomy at that age that few cases have been reported. That a very early period of life is not incompatible with a successful issue is proved by the experience of Scoutetten, of Strasburg, who operated on his own child at the age of six weeks with recovery. Bell had a successful case at six and one half months. Taft at seven, Greenfield at ten months, and Cooper at eleven months. Steinmeyer has just reported a case of nine weeks old, in which the trachea was the size of a goose quill, and displaced to the left.

Croft reports a case where a child of six months recovered from tracheotomy performed for erysipelatous inflammation of cervical region.

Elias, two successful cases of the operation in the first year of life for diphtheritic croup.

The canula I have used has been the ordinary double fenestrated tube. Parker recommends as large a tube as can be introduced without actual violence, and approved the angular rather than the quarter circle form.

Foulis carefully adapts the tube to the size of trachea. At birth the trachea measures 4–5 millimetres, and for several months it is not enlarged. He has five different sized tubes, adapted to different ages, from 4 millimetres to 12 millimetres in diameter.

CONCLUSIONS.

From the experience of others and from my own, I have arrived at the following conclusions: —

(1.) The point of election is just below the cricoid isthmus.

(2.) The isthmus of the thyroid, if recognized, should be pushed down, the cervical fascia of the median line having first been incised, and the trachea exposed by carefully separating the parts with a director; or

(3.) The thyroid isthmus may be entirely disregarded, and the parts freely incised, in which case all hæmorrhage should be checked before opening the trachea.

(4.) Deliberation, careful dissection, and a bloodless operation is better than the gain of a few seconds at the expense of hæmorrhage into the trachea.

(5.) Ether should be used except in extreme asphyxia.

— The *Medical Times* asserts editorially that at the Philadelphia Hospital the public clinic room where ovariotomy and other most delicate operations are performed is situated directly between a ward devoted to erysipelas and a mortuary.

---

[1] Edinburgh Medical Journal, April, 1881.

MEDICO-LEGAL RELATIONS OF INSANITY.[1]

BY IRA RUSSELL, M. D.

The subject assigned me is one of great difficulty. Much has been written upon it by men of profound learning and superior ability, and the conclusions formed are matters of controversy. Some writers, like Ray, seem to make too much of unsoundness of mind as an excuse for crime, while others go to the opposite extreme, and make acts punishable that are due to disease. The great problems first encountered are, What is mind? and What constitutes insanity?

What is mind? Is it an independent entity distinct from and existing separate from matter, or is it a function of the brain? We only know mind by its properties — thought, reason, love, hate, etc. We only know matter by *its* properties, such as extension, weight, etc. None of the properties of either are common to both. We see matter and mind existing together; we see matter without mind; hence we infer that as mind and matter have no properties in common, mind can exist without or disconnected with matter. Assuming, then, that mind is an immaterial entity, can it be diseased? I quote some of the highest authorities upon this point. Dr. Forbes Winslow, the able editor of the *Psychological Journal* of London, says he has examined no less than ten thousand cases of insanity, reported by different authors, with a view to ascertain if there was physical disease as the basis of the trouble, and the result is perfectly satisfactory to him of the material cause of mental derangement. Yet he says, "I do not maintain that I am in a position to describe the peculiar and specific alterations which some allege to give origin to that derangement of the action of thought to which we apply the term insanity. Admitting such a discovery to be beyond the range of finite intelligence, it does not, in the slightest degree, militate against the material view just propounded." Dr. D. Meredith Reese thinks "the brain is now recognized as the organ or instrument of the mind, in every enlightened creed, either among jurists, theologians, or physicians. The mind sits enthroned in its immaterial majesty, employing the brain and its continuous elongation in the nerves, not only in directing all the intellectual, moral, and instinctive faculties, but in the perception by the several senses, and in the mobility of the voluntary muscles, in obedience to the will, and in a subordinate way, by innervation, it may be regarded as enabling every organ and tissue in the human body to perform its destined function in conformity to the vital laws." Thus the ablest advocates of the doctrine that insanity depends always upon disease of the structure of the brain, or of some other part of the body, are unable to tell what or where it is.

On the other hand, difficulties of equal and perhaps greater magnitude stare those psychologists in the face who reject the material explanation, and thereby admit, if not squarely declare, that the immaterial, immortal essence of pure thought may be subject to disease. That this God-like principle is liable to become diseased like the grosser parts of the singularly intricate combination we call the physical man? is not this contrary to our conception of that wonderful spirit that thinks within us? If the spiritual principle is subject to disease, why not to death, to complete destruction or dissolution, the natural result of disease? "How can that subtle, mental essence, which has neither members nor parts, be disordered? How can the immortal principle within us decay? It cannot be; disease, disorder, decay, all belong to the body, and to the body only; and consequently we must place the essential seat of insanity in the body, not the mind." It does not, however, follow conclusively that because mind is immaterial it cannot become diseased in itself, nor does this view render the immortality of the soul less probable and true. An able writer says, "It is not a purely corporeal disease, like one of the neuroses; it is not a nervous affection merely, but a neurosis and something more; neither is it purely a mental affection or disease. Both mind and body are at fault." According to the views of Feuchterleben, it is their *relation* that is diseased — of the body to the mind, so that perception is morbid; of the mind to the body, so that volition is disordered. From which, then, does that disturbed relation proceed which, when established, becomes reciprocal?

Perhaps I ought to say that, strictly speaking, insanity is not entirely due to a physical disease as its first cause. Purely mental disturbances are sometimes the cause upon which the physical disease which produces insanity depends. Granting that insanity is a physical disease, can it be defined? Is there a definition that will cover all its phenomena? I have seen no such definition; all attempts to define insanity have been faulty. There is no standard of health or disease; so gradually do they shade into each other, mental as well as physical, that the line between them is an imaginary one.

Who at the close of day can mark where daylight ends and darkness begins? Who can tell where a child passes the line of accountability? Where do virtue and vice shade into each other? Where is the boundary of courage and rashness, between prudence and cowardice, between frugality and avarice, liberality and profligacy? When any or all of these things can be done, then, and not till then, may insanity be defined and its boundaries established.

As medico-legal witnesses we have to trace the line which separates passion, the subtle and shifting transformations of wild, ungovernable, impetuous passion, from the excitement of mania, the nice and shadowy distinction which separates lunacy from malignity, madness from brutality, crime from alienation of mind, vice from mental derangement, and between the delusions of the lunatic and the false reasoning and absurd conclusions of many sane persons. There are many cases of insanity so palpably plain as to admit of no doubt by either physician or layman, but there are a great variety of obscure cases that require the closest scrutiny to arrive at a correct diagnosis. As Maudsley says, in a general way, we may arrange the manifold varieties of insanity into two great divisions, according to the presence or absence of palpable intellectual derangement. The first division will contain all those in whom are insanity of thought or insanity with delusions, intellectual insanity. The second division, all those cases in which, without delusions, there is insanity of feeling and action, and may be called affective or moral insanity. Guiteau, in my opinion, should be considered as belonging to the latter class; he committed an insane act; he was not laboring under any delusion; his plea of divine inspiration was not a delusion, it was a part of his religious belief.

---

[1] Read before the Massachusetts Medico-Legal Society, October 4, 1882.

In fact this latter form is the most dangerous, as it displays itself in acts and not in thoughts.

Of intellectual insanity there is a great variety. In some the delusions are general and embrace all the intellectual operations, and may be termed general mania. Then there is a large number in whom the insanity pertains to only one thing or subject, while upon all other subjects the intellect is clear. Medical literature is full of such cases, and every insane asylum has numerous illustrations. We have pyromania, kleptomania, etc., etc., each of which has a symptomatology peculiar to itself.

The form of insanity known as general paresis, in its different stages, has many of the symptoms peculiar to the other forms of insanity. Perhaps the first symptom manifested will be some moral obliquity; a person of the strictest moral character, upright in all his transactions, when suffering from this form of insanity not unfrequently becomes grossly immoral and dishonest, and is arrested and punished, to the great chagrin of all his friends.

The disease has its regular course, and after passing through various phases ends in death.

Any one familiar with epilepsy has observed the mental condition that frequently precedes and follows the convulsive attack. The sufferer becomes violent and homicidal, and many of the most horrible murders are perpetrated while he is in this condition. There are cases of masked or abortive epilepsy in which the convulsive paroxysm does not occur. The diseased action manifests itself in convulsion of *ideas*, not of muscles. Several very interesting cases of this kind have come under my observation. In one instance a person, after great mental and physical effort, would become suddenly excited, and abuse his most intimate friends with the most opprobrious language. The attack would pass off, and he would have but an imperfect recollection of what he had said or done. I have known cases where, when the paroxysm had passed, they would accuse others of having said to them what they had said to others.

This class of epileptics are always dangerous, and rendered more so from the fact that the paroxysms may occur at long intervals, and during the interim they are entirely harmless. Did time permit I could relate many instances of crime committed by persons suffering from the various forms of insanity, but I hasten to consider the question of responsibility.

It being admitted that a person committing a crime is suffering from some one of the various forms of insanity, to what extent should he be regarded as responsible for his acts? The old English Common Law regarded everybody who knew the difference between right and wrong as responsible. Thus in the trial of Arnold — an undoubted lunatic — for shooting at Lord Onslow in 1729, Justice Tracey said, "It is not every kind of frantic humor or something unaccountable in a man's action that points him out to be such a madman as is exempted from punishment. It must be a man totally deprived of his understanding and memory, and who doth not know what he is doing no more than an infant, than a brute, than a wild beast." While the above rule was observed in relation to criminal acts, an entirely different one prevailed in relation to civil matters. Men that were not regarded capable of managing their affairs were held strictly responsible for all criminal acts. On the wild beast test many insane persons have been executed in Great Britain, notably the case of Bellingham, who was tried and executed for the murder of Spencer Percival in 1812. Although it was perfectly clear that he acted under the influence of an insane delusion, he was tried immediately, and executed without delay. Since then the rulings in the courts of England have been somewhat modified. In 1843 McNaughton was tried and acquitted of the murder of Mr. Drummond, whom he shot under the delusion that he was following him with evil intent and blasting his character.

Much popular alarm and indignation was caused by his acquittal. The House of Lords, participating in the general alarm, propounded several questions to the judges of the courts to obtain from them an authoritative exposition of the law for the future guidance of courts. The judges ruled that to establish a defense on the ground of insanity it must be clearly proven that at the time of committing the act the party accused was laboring under such a defect of reason from disease of mind as not to know the nature and quality of the act he was committing, or, if he did know it, that he did not know he was doing what was wrong. Thus it will be seen that a knowledge of right and wrong is still the legal test for responsibility in Great Britain. To the medical man, acquainted with the protean forms of insanity, this test is far from being satisfactory. Go into any insane asylum and examine the cases of undoubted lunacy, and a large proportion of the inmates will be found to know, and, in a measure, to be influenced by their knowledge of right and wrong.

Many will do things because they know them to be wrong. The true test, in my judgment, should be this, Is the criminal act the result of disease?

The rulings of the courts in this country are in advance of those in England.

Chief Justice Bell, of New Hampshire, says "that a person to be punishable by law must have, in addition to a knowledge of right and wrong, sufficient mental power to control the sudden impulses of his own disordered mind. The power of controlling the thoughts being lost, the power of the will over the conduct may be equally lost." Chief Justice Perley instructed a jury to render a verdict of not guilty if the killing was the result of disease; "that neither delusion nor knowledge of right and wrong, nor design nor cunning in planning and executing the killing and in escaping or avoiding detection, nor ability to recognize acquaintances, or to labor, or transact business, or manage affairs, is, as a matter of law, a test of mental disease; but that all symptoms and all tests of mental disease are purely matters of fact to be determined by the jury." Judge Doe, of New Hampshire, in a lengthy and able charge to the jury, too long for me to quote, says that the product of mental disease "is not a contract, a will, or a crime." I have under my care a patient, crafty, cunning, and treacherous. He is a graduate of Harvard College, has traveled abroad, can talk intelligently in regard to many things, art, poetry, etc., and is fully able to distinguish between right and wrong. He is under the constant watch and care of an attendant. He would not hesitate for a moment to kill his attendant or any one else if by so doing he could accomplish some secret purpose. In law a person accused of crime has the benefit of a doubt as to whether he has committed that crime.

When the plea of insanity is urged in extenuation of crime, and there is a doubt about the sanity of the accused, it is allowed to have weight in six of the United States, while in the remainder the insanity must be proven. I know that there is a popular feeling that the plea of insanity is often a trumped up one, and that there are physicians who, for a consideration, will testify that the accused is insane, and that many escape deserved punishment upon that plea. The popular indignation against Guiteau has done much to intensify that feeling. Leaving out the question of Guiteau's responsibility, who that is conversant with insanity doubts his unsoundness of mind? Occasionally cases occur like that of General Sickles, who was acquitted on the plea of insanity, when in reality it was the popular opinion that there was a justifiable cause for the crime that influenced the jury to acquit. Doubtless ten insane persons have been executed where one sane person has been acquitted on the plea of insanity. One of the reasons why there is so much skepticism about insanity in the popular mind, and among the general practitioners of medicine, is doubtless owing to the fact that the insane are mostly under the care of asylum physicians. Until recently students in medicine had but little instruction in psychological medicine. When the older members of this Society attended medical lectures, almost nothing was taught respecting insanity, and when we met with cases we sent them to the asylum for treatment, and that, in many instances, when they could have been better cared for at home. We sent them to asylums because they were insane, and we did not feel competent to treat them. It is much easier for an insane person to feign sanity than for a sane person to feign insanity. I might mention numerous cases to substantiate this statement.

The celebrated Erskine relates the following circumstance: "I well remember," says he, "examining for the greater part of a day, in this very place (the Court of King's Bench), an unfortunate gentleman who had indicted a most affectionate brother, together with a keeper of a madhouse at Hoxton, for having imprisoned him as a lunatic, whilst, according to his evidence, he was in his perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact; but not having a clew, he completely foiled me in every attempt to expose his infirmity.

"You may believe that I left no means unemployed which long experience dictated, but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judge and jury, and to a humane English audience, as the victim of the most wanton and barbarous oppression. At last Dr. Sims came, who had been prevented by business from an earlier attendance; from him I soon learned that the very man whom I had been above an hour ineffectually examining, and with every possible effort which counsel are in the habit of exerting, believed himself to be the Lord and Saviour of mankind, not merely at the time of his confinement, which was alone necessary for my defense, but during the whole time he had been triumphing over every attempt to surprise him in the concealment of his disease. I then affected to lament the indecency of my ignorant examination, when he expressed his forgiveness, and said, with the utmost gravity and emphasis, in the face of the court—'I am the *Christ.*' And so the case ended."

How are we to determine whether a person is insane or not? Is it by comparing one person with another? The civilized man with the savage? The upright, conscientious man with thieves and pickpockets? The man must be compared with himself. Here is a middle-aged man who, all his life, has maintained an unblemished reputation,—an earnest, conscientious, religious man. Perhaps he is detected in some immoral practices,—he commits some dishonest act entirely foreign to the whole tenor of his life,—he is arrested and punished. To the world he appears perfectly sane, but the expert alienist sees the incipient signs of general paralysis of the insane and predicts, with absolute certainty, the end. The localization of function, as taught by Ferrier and others, throws light on partial insanity. Here is a patient that talks incessantly. May we not infer in such a case, that there is an irritative lesion of the oro-lingual region in the third frontal convolution?

Another patient runs or walks continuously in a purposeless manner, and if held down in bed will continue to move his feet. In such a case may we not suppose there is irritation of the postero-parietal lobe of the brain, in which Ferrier has localized crural movements? Another is constantly swinging his arms, and may not this movement be due to irritation of the ascending and frontal gyri, in which the brachial and manual movements are localized?

In the same manner may we not account for mental manifestations,—some one of the faculties of the mind being affected while all others are intact? Take the case of the suicide; may it not be that that part of the brain which presides over the instinctive love of life is dormant? May we not also thus account for many cases of partial insanity? Be this as it may, to what extent shall the partially insane be held responsible for criminal acts? A patient of mine, a physician, had syphiliphobia without any sign or symptom of syphilis, and was pronounced free from the disease by several eminent syphilographers. While his mind was clear and reasoning correct upon any other subject, he deliberately formed the plan to take his own life and that of his wife and child, and would have accomplished his purpose had not his plans been frustrated. Had he committed this act would it not have been in direct consequence of his disease? Should he have been held responsible for it? To return to the epileptic. I once had under my care an epileptic, a young and interesting lady. She had a husband and child, and although she had formerly been an affectionate wife and mother, she neglected every home duty, assigning as a reason that she no longer cared for her family; in the mean time she endeavored, by various arts, to attract the admiration of the opposite sex. She could reason correctly upon many matters, but would any intelligent physician hold her responsible for this peculiarity that I have mentioned?

I might go on citing instances, but time will not permit. I will simply say that in my opinion the whole mental condition should be considered in deciding this important question of responsibility. A person may be rightly held responsible for all acts except those bearing upon some one point, and yet, from the condition of some part or function of the brain, be wholly irresponsible on this one point. I believe, then, that the mental condition of the partially insane should be carefully shown, and if the criminal act shall be proven to result from one or more delusions, then the person shall not be held responsible for such act, although sane in every other respect.

In conclusion, I would say that I deem it of the utmost importance that provision should be made for the care and custody of insane criminals. In no case should they be allowed to be at large, neither are they suitable subjects for insane asylums or the State prison.

◆

REPORT UPON NEW PHARMACEUTICAL PREPARATIONS, AND THE INSPECTION OF FOOD AND DRUGS.

BY BENNETT F. DAVENPORT, M. D.

The recent appearance of the sixth revision of the United States Pharmacopœia has added thirty crude organic drugs, sixty inorganic chemicals, one hundred and fifty pharmaceutical preparations, and sixteen miscellaneous substances, two hundred and fifty-six titles in all, to the official list of our materia medica, while it has dropped two hundred and twenty-nine titles that were contained in the preceding revision. The present Pharmacopœia contains nine hundred and ninety-seven official titles.

Among the newly added preparations are eleven abstracts, ten solid extracts, thirty-five fluid extracts, eleven syrups, twenty-two tinctures, and six wines. The abstracts are a new class of preparations introduced to supply the demand for dry powdered extracts. They are just twice the strength of the crude drug, or about twice that of the corresponding fluid extracts, which, according to this revision, will be made about five per cent. weaker than before. General directions for the preparing of triturations and tinctures of fresh herbs (tinctura herbarum recentium) have been introduced to insure uniformity in their preparation whenever they are prescribed.

The new official base for ointments, petrolatum, obtained from petroleum, is to have a melting point of from 40° to 51° C. The low melting variety is always to be dispensed when the melting point is not specified.

The single elixir of orange has been introduced to furnish a pleasant official vehicle for the administration of nauseous medicines.

By the process of reducing the proportion of drug to solvent in the tinctures, wines, etc., to some simple decimal relation, the strength of the tinctures of aconite, of nux vomica, of veratrum viride has been slightly reduced. The tincture of opium, however, has been strengthened about fifty per cent., while the acetum and vinum opii, upon the other hand, have been reduced.

The triturations are prepared with sugar of milk and ten per cent. of the powdered drug, just as is now the case with the new Dover's powders. The tinctures of the fresh herbs will contain fifty parts of the bruised herb to one hundred of alcohol. The abstracts are those of aconite, belladonna, conium, digitalis, hyoscyamus, ignatia, jalap, nux vomica, podophyllum, senega, and valerian.

Among the other new official preparations the following are the most important: Boric acid, which has of late been brought into prominence for its antiseptic properties.

Moulded nitrate of silver, which contains about five per cent. of silver chloride; and the diluted, having fifty per cent of potassium nitrate.

Chloride of gold and sodium, which contains fifty per cent. of gold chloride.

Nitrate of potassium paper, which is an unsized paper that has been dipped into a saturated solution of the salt and then dried.

The several cinchona alkaloids, which were not before official.

A styptic collodion, containing twenty per cent. of tannic acid.

A capsicum plaster, having one fourth grain of oleoresin of capsicum spread upon each square inch of surface.

Fluid extracts of aconite root, of aromatic powder, of cannabis indica, of capsicum, of erythroxylon, of eucalyptus, of guarana, of hamamelis, of leptandra, of lobelia, of nux vomica, of pilocarpine, of podophyllum, of rhamnus frangula, of rhus glabra, of rose, of stramonium seeds.

Among the iron preparations are a saccharated carbonate and an iodide.

An ammoniated extract of liquorice in a scale form.

An ammonia liniment made with cotton-seed oil, a belladonna liniment having ninety-five per cent. of the fluid extract to five per cent. of camphor. A compound liniment of mustard containing three per cent. of the volatile oil.

A liquor pepsin containing four per cent. of the official saccharated pepsin, which is of such an assayed strength that one part dissolved in five hundred of water acidulated with seven parts of hydrochloric acid will dissolve at least fifty parts of hard-boiled egg-albumen in from five to six hours when kept at a temperature of 38° to 40° C.

Lithium benzoate and salicylate.

A mixture of acetate of iron and ammonia, of magnesia and asafœtida, and of rhubarb and soda.

A ten per cent. oleate of mercury, a two per cent. oleate of veratrine.

Denarcotized opium as a dry powder with sugar of milk, assaying fourteen per cent. of morphine.

A one per cent. phosphorus pill.

A compound powder of liquorice having two per cent. more senna than the familiar powder from the German Pharmacopœia.

Sugar of milk replaces soda sulphate in Dover's powder, and Tully's powder has been introduced under the title of pulv. morphin. comp.

Sapo viridis is now made official, as is also sodium benzoate, bromide, iodide, and salicylate. So also is cologne, under the title of spiritus odoratus.

To the tinctures, which have now all some simple proportion to if they are not of an exact ten per cent. strength, have been added those of fresh orange peel, ferri acetate, gelsemium, ignatia, ipecac with opium containing one hundred parts of deodorized tincture of opium to ten of fluid extract of ipecac, physostigma, aromatic and sweet tincture of rhubarb, and, the most important of all, the simple tincture of opium, with the camphorated and deodorized tinctures, all of which are of new strengths in this revision, the deodorized being made of the same strength as the simple tincture, while the camphorated is only one twenty-fifth of that. The simple tincture itself is now required to be made from eleven per cent. more opium powder than formerly, while the opium itself must have at least twenty per cent. but not over sixty per cent. more morphine than was formerly required. The tincture is thus now required to have from thirty-three to seventy-seven, or an average of about fifty per cent. more morphine strength than it was formerly. This is a fact that it will be well for all physicians and pharmacists to bear in mind whenever using the preparation.

The only trituration given in the pharmacopœia is that of elaterin.

An ammonium chloride troche has been introduced, also one of sodium santoninate.

Among the ointments is the petrolatum or petroleum ointment, and also that of chrysophanic acid, also gallic, besides the diachylon, iodoform, and the compound sulphur ointment.

The new wines are the white and red, both of ten to twelve per cent. of alcohol by weight, also the stronger white of twenty to twenty-five per cent. There are also the wines aromatic, ferri amarum, and citratis.

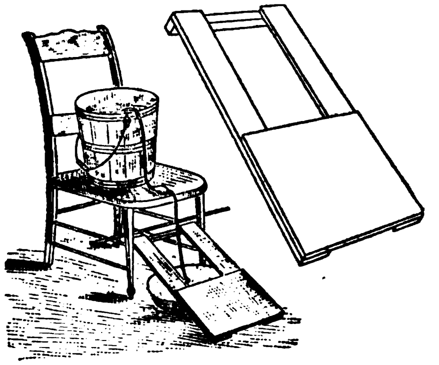
Besides the above new official preparations, tannate of albumen has come into use as an internal astringent.

New Instruments.

A VAGINAL DOUCHE.

BY J. B. GEROULD, M. D., NORTH ATTLEBOROUGH, MASS.

The hot douche as a therapeutic means in the treatment of uterine and vaginal disease is of recognized value. But outside of the hospital and among people of means its use is very limited. The apparatus which renders the taking of a hot vaginal douche a comparatively easy undertaking is quite expensive, thereby excluding it from a large class of patients. When we try to reach the same end by the use of pillows, rubber cloth, chairs, etc., our patient is generally overcome by the manifold directions, and if the attempt is made she is almost sure to saturate herself, the bed, and bedding, and the hot douche is ever after thought of only with disgust. Then with any apparatus an assistant can hardly be dispensed with.



The following simple contrivance I have found materially simplifies the matter, and renders the taking of the hot douche not such an appalling operation. The expense is practically nothing, an assistant can be dispensed with, and the preparations for taking the injection can be made in a moment. A blanket, chair, pail of hot water, syringe, wash-basin, and board (which I will now describe) constitute the necessary apparatus. The board is of one half inch, either pine or white-wood, from ten to twelve inches long, and ten inches wide, on the under side of which two strips two and a half by twenty-four inches are nailed (see cut); uniting the two free ends is a short strip, which hooks over round in the chair, thus preventing any slipping. A cushion tacked on the board will increase the comfort of the patient; this should be covered with some rough cloth rather than anything smooth. The siphon syringe is the best, but by adding two feet of one fourth inch rubber tubing to suction end of a Davidson's we get the same thing. A broom-stick resting on the upper rounds of the chair and tied to the front legs makes a very good rest for the feet.

The patient is to take the blanket and fold it lengthwise two or three times, and lay on the floor; two feet from one end of it is placed the chair, in which is a pail of hot water and syringe, and between is the board (described above). An earthen wash-bowl is placed at one side within easy reach. She is now to lay down with the nates well over the edge of the board; by raising herself on feet and shoulders the board can easily be hooked on round of the chair. Now slip basin under the board and everything is in readiness for the injection. The ordinary wash-basin holds nearly one half pail of water, so by having two the necessity of interrupting the douche will be avoided.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, M. D., SECRETARY.

November 6th. Dr. C. H. Williams presided.

Dr. M. H. Richardson read the regular paper on

TRACHEOTOMY, WITH A REPORT OF THREE CASES,[1]

and illustrated various points of the paper by reference to a careful dissection of the region involved.

Dr. Porter said: The subject of tracheotomy is deeply interesting to me personally, and in the whole range of surgery there is no operation which I approach with so much dread, not that it is more difficult than any other, but the life of the patient depends on its proper seasonable performance, and the time allowed is short. On the cadaver the operation is simple and easy, nor on the living subject where the parts are healthy, and the trachea is opened merely as a matter of convenience in order to facilitate operations on the throat or face, is there likely to be much trouble. But in the diseased subject, where the parts are swollen and in motion, where the trachea lies abnormally deep, where the patient is suffering from asphyxia present or impending, and the veins are distended, the operation is often exceedingly difficult. One can never tell beforehand what difficulties must be encountered. They come suddenly as the operator advances in dividing one tissue after another. The operation is most frequently done for diphtheria, and it is with especial reference to this that I shall discuss the subject.

What are the most important complications? They are three in number: first, spasm of the glottis caused by ether; second, hæmorrhage; third, the frequent membranous lining of the trachea.

First, spasm of the glottis often results from ether. It probably occurs in the majority of cases, and renders it necessary to complete the operation quickly. I never undertake tracheotomy without at least two trained assistants, one to attend to the ether, the other to help the operation. Twice I have nearly lost patients through inability to observe this rule. In one case where I had but one skilled helper, it was only through the aid of the father, who had the nerve and the confidence to do implicitly as he was directed, that the operation was completed, and the child resuscitated by artificial respiration. In another case in which a second assistant had been sent for, spasm of the glottis occurred, and the opening of the trachea could not be delayed. The operation was therefore done while the father held his struggling child.

---

[1] See page 553 of this number of the Journal.

The books pay but little attention to spasm of the glottis occasioned by ether, but it is, notwithstanding, very common. It is one of the most trying complications, necessitating, as it does, instant action, and emphasizes beyond anything else the importance of adequate assistance.

Second, hæmorrhage and tension of the veins. On this point I need add nothing to what has been already said by the reader.

Third. The trachea is often so lined with membrane that after the opening is made air does not enter. The dilators press on the membrane, and the tube is completely stopped. In one case the membrane was so tough that after introducing a long catheter and practicing artificial respiration a complete cast of the trachea was drawn out before respiration was reestablished. If air in any case does not enter, the presence of this membrane should be suspected and sought for.

In general in cases of stenosis of the larynx the operation is too long deferred. The child is allowed to become exhausted by his labored breathing. The disease is asthenic, and the child should be saved this demand on its strength. Hence as soon as the suprasternal and clavicular notches are depressed in the act of inspiration the operation should be performed without delay. By an early operation it is probable that many cases would be saved which are now lost.

Further, the parts may be very different in disease from their normal condition. The soft parts may be swelled so that they come out even with the chin, and I have seen a case where they made a straight line from the chin to the sternum. In one case I had to penetrate three inches below the surface before reaching the trachea, and the dissection was long and difficult. In this case I refused absolutely to do it with ether, and, as a rule, it is better to operate on adults without anæsthetic. There is little pain except from the initial stroke through the skin, which can be made in an instant, and the remainder can be done, if ether is not used, easily and deliberately. Patients thus operated have said they had almost no pain, and were glad they had not taken the anæsthetic.

The proposed position for operation with the head hanging over the table seems, theoretically at least, to be the worst possible. With the head thus placed the air passages would be closed and the veins tense. It is, of course, a point to be settled practically, but I should hesitate to operate in this position.

The operation with a single stroke is essentially unsurgical. In a child whose trachea is soft and small success is very doubtful. In the adult it can be done in this way, but it should never be resorted to except in an emergency which brooks no delay.

In a case at the hospital in which the throat had been suicidally cut, the operation was performed with the trachea pushed forcibly to one side by the digital compression of the carotid artery.

As regards the after-treatment, the essentials are food, disinfection, and stimulants. Medication is secondary. To disinfect is of the first importance. Cases in which there is a discharge from the nares, showing the presence of the disease in this part, generally turn out unfavorably. They die of blood poisoning. This result may possibly be due to the fact that we cannot so well disinfect the nares as the throat, and we should make especial efforts to this end.

The cardiac paralysis which so often occurs in cases of diphtheria is an important feature, and it is necessary to lay stress on the free exhibition of stimulants. A case which appeared to be doing well in all respects, taking food abundantly and gaining strength, died suddenly of heart paralysis. It is not impossible that a freer use of stimulants would have saved the patient. In another case the child was able, cautiously, to go out to walk and to drive. She was taken out for a horseback ride, and on returning fell suddenly dead, also from paralysis of the heart. If cardiac paralysis comes at all it is generally a late symptom, and this should be borne in mind, and the exhibition of stimulants continued to full convalescence.

DR. GAY. I have found the easiest point at which to open the trachea to be just below the cricoid cartilage, that being its most superficial part. The isthmus of the thyroid is to be divided if necessary, no harm ever having resulted from so doing in my experience. I have discarded the director in doing this operation, preferring to cut through the fasciæ and other tissues by repeated incisions until the trachea is reached. By keeping exactly in the median line, gentle traction being made on each side of the wound, the larger vessels may usually be avoided.

Although it has fallen to my lot to meet with profuse hæmorrhage in doing the operation, yet I have never lost a patient from this cause. Considerable bleeding is to be expected in children with fat or swollen necks, especially if dyspnœa be great, or has been long continued.

The readiness with which blood may be expelled from the air passages by simply inflating the lungs through a tube was well illustrated in the case of a Chinaman, who was admitted to the City Hospital, under my charge, a few months since. He had attempted suicide by shooting himself in the mouth. Having been etherized, an incision was made on the left side of the neck near the spinous processes, and the ball easily removed. Suddenly the patient became cyanotic, and stopped breathing. Artificial respiration failing to revive him, the trachea was opened, and a large elastic catheter passed down into the bronchi. By inflating the lungs with moderate force a considerable quantity of blood was expelled from the wound, and the patient was soon breathing naturally again.[1]

This would seem to be the most rational way of clearing the air passages of any liquids. Suction is not usually efficient. Nature herself gets rid of irritating substances in the bronchial tubes by forcible expirations, and these are impossible, unless air can first get into the lungs. Whether this method would be successful in expelling fluids usually found in diphtheria, I do not know; but no surgeon is called upon to risk his life in an attempt to suck out such fluids. It is seldom, if ever, attended with success, and too many valuable lives have already been lost in the profession by this rash and unjustifiable effort to save others.

I have performed tracheotomy eleven times without ether, and am convinced that it is the better way in cases of children with impaired strength and severe dyspnœa. There can be no doubt that ether obstructs respiration to a dangerous extent in some cases, thus requiring the operation to be finished in haste, and mostly by the sense of touch. The pain is not severe after the skin is divided, and with good assistants, who are invaluable in these cases, the operation can be done in children almost as easily without, as with, an anæsthetic, and moreover the surgeon is not constantly harassed with the fear that his patient may stop breathing before the windpipe can be opened.

---

[1] The hæmorrhage was the result of a wound of the vertebral vessels on the left side.

Some surgeons do not believe in tracheotomy in diphtheria. Their argument is, that as many recover without the operation as with it. That assertion lacks proof. I have performed tracheotomy twenty-nine (29) times for this disease; and six of the patients recovered. I have never seen a case of laryngeal diphtheria get well without the trachea having been opened. Every operator of much experience must have met with cases in which there seemed to be no doubt that life was saved by the operation. With the exception of two instances, in which the patient survived the operation but a few hours, I have never had cause to regret performing it. Diphtheria, when it invades the air-passages, is such a fatal disease, that the patient and his friends should be made to feel that every resource of our art is being tried in the case. I believe in the operation in suitable cases, but I do not think it is wise to operate on children who are in the last stages of septicæmia, and are liable to live but a few hours. They do not generally rally from the operation, and hence get little or no benefit from it. I am convinced by experience that tracheotomy in diphtheria will often relieve suffering, it will prolong life, it will give comfort to the friends, and occasionally it will save the patient.

DR. PORTER said that, in his opinion, it was the duty of the surgeon to perform the operation, with a view to euthanasia alone, for any patient who asks it, even if he does not survive an hour. Let him at least die in comfort. To die by stenosis of the larynx is terrible. A patient on whom I operated wrote, almost in his dying hour, a message of gratitude that he had been relieved of so much suffering, and this would be the general testimony. In going to an operation a catheter should always be taken, in order, if need be, to blow up and relieve the lungs to produce artificial respiration. No surgeon should run the risk of sacrificing his own life for a patient. One may in the excitement sometimes forget himself. But he should deliberately make up his mind not to do it under any circumstances.

DR. M. H. RICHARDSON said that the lungs were much more effectually relieved by inflating them through a catheter than by sucking the wound. Fluids are usually expelled from the lungs in the form of froth, by coughing, and they appear in this form when one blows into the lungs. To suck fluids from the body of the lungs is a mechanical impossibility.

DR. BOLLES said he had operated seven or eight times. The spasm of the glottis spoken of had occurred in some of his cases, but not until the dissection was well advanced towards the trachea, and it seemed to him to be not so much an effect of the ether as a reflex phenomenon, produced by the irritation of the knife or finger upon the tissues in the neighborhood of the larynx. A cessation of respirations for a few seconds, from this cause, in patients not too much debilitated, is not so dangerous as it seems to the surgeon and bystanders; for if the breathing does not begin again spontaneously it can be restored by the usual methods of artificial respiration, or by tickling the trachea or Faradism after the opening is made into the air-passage — the most important thing being to complete the operation.

Unless he has some special apparatus for the purpose, the surgeon should *always* carry to a tracheotomy a large elastic catheter, and a syringe fitting it, capable of either suction or expulsion of air, — to assist either in inflating the lungs or in expelling mucous blood or membrane.

In two cases where the operation was performed upon patients in a condition of great exhaustion, apparently just before the end, when respiration and the action of the heart had both ceased, so far as could be seen or felt, the Faradic battery, *ready for instant use*, restored both functions after artificial respiration and other stimulants had failed. The battery should not only be carried, but set up — with all its connections made, and the electrodes attached.

Dr. Bolles and other physicians in Dorchester have given up heating the room to an excessive degree and saturating it with vapor, as was formerly practiced after the operation, having found that a soft, good bath sponge, large enough to cover over the front half of the neck, and porous enough to allow easy breathing through it, occasionally moistened with hot water, either pure or medicated, and securely fastened over the tube, answers a better purpose. It moistens the inspired air more effectually, leaves the temperature of the room more comfortable, and catches the matter coughed out, often better than the attendant can. It is not generally necessary to keep it on more than half the time, the loose or dry character of the breathing being an easily understood guide. Of course, when soiled it must be taken off and washed. He found the atomizer, whether hand or steam, apt to frighten the little sufferers. The value of the operation as a means of euthanasia appeared to him to be generally overstated; the instant relief afforded by it, the comfort, sleep, and perhaps playfulness of the patient for a few succeeding hours, and the gratitude of the friends, make a most dramatic contrast to the agony which had preceded it. After this, if all goes well, or even if death occur from exhaustion or syncope, as it sometimes does, a great relief has been accomplished. But oftener diphtheritic bronchitis supervenes, and the unfortunate goes through another death, more prolonged, more hopeless, and to Dr. Bolles's imagination no less distressing, than that from which he had been once rescued. The restlessness, beating the air, clutching at the throat or chest, the supplicating and agonized look may be but little less intense than before, and several times as prolonged. The surgeon has mean time gone home, well satisfied with his operation, leaving the case in the care of his assistants; he sees it only at intervals during the day, and is apt to undervalue the dreary hours following an unsuccessful tracheotomy, unless he can recall his student days, when as assistant he has watched every breath of such a patient, from the beginning to the end. As a life-saving means it ought almost never to be refused.

DR. J. B. AYER spoke of the great responsibility of the physician in advising in regard to tracheotomy in diphtheria. Most of his cases had, in his judgment, not been adapted to the operation, as the obstruction to respiration was due to exudation and membrane in the trachea and bronchi as well as in the larynx. Instead of the terrible paroxysms of dyspnœa, accompanied by lividity, followed by a period of easy respiration, there was continuously rapid and labored respiration, exacerbations being fewer and less severe than in croup.

He advised an early operation when the dyspnœa was due to laryngeal stenosis, but advised against the operation when a large part of the respiratory tract was involved, especially as he had seen the recovery of a young child without operation in an apparently hopeless case of this description.

WATER SUPPLY OF BOSTON.

DR. POST brought up the subject of the water supply of Boston, and said that the commission appointed by the mayor to investigate the water was holding sessions, but they were poorly attended and meagrely reported. The people generally seem apathetic, and it would be a fair inference that the medical profession also took little interest in the matter. An expression of opinion, at least, should be presented from the physicians, and would not be without influence. He therefore moved the adoption of a resolution by the Society, to be transmitted to the commission, expressing the interest of the Society in the subject.

DR. WILLIAMS asked if any cases had been known where sickness or disease could be ascribed to the water. He had personally examined the various basins. The difficulties probably arose from the loam that had been left in them. We have drunk up much of this, and very little remains. To remove the balance would involve a large expense, and probably do very little good. Formerly the city used but 10,000,000 gallons of water daily. The present consumption reaches 30,000,000 to 40,000,000 gallons, and we cannot get this large quantity of as good quality as the smaller quantity. We should be careful not to frighten people without good reason into believing they are in danger of disease from this source.

DR. POST replied that he had not known any instance of disease traced to the water. The resolution is so worded as to encourage the commission and not to frighten the people. It is brought forward for fear the commission may be led, through the apparent lack of interest, to bring its work to an unseasonable close. We need not wait for the actual development of disease. The smell and the taste are sufficient warnings, and the commission should be urged to a thorough investigation. The Natick sewerage certainly affords ground for apprehension of the future.

DR. WILLIAMS stated, as regards the Natick sewerage, all is now done which the statutes allow. It is on the whole pretty well taken care of, for it is filtered through several dams, and only a little enters the basins at certain seasons of the year.

DR. BRADFORD said there existed an apparent lukewarmness on this subject. There is no reason why we should not say that the water is disagreeable. The laws and their mode of execution are not important in this connection, but we should as physicians urge all possible improvement in our water supply.

DR. G. B. SHATTUCK stated that the water in London was considered very poor, and a commission had been appointed to devise means of improvement. A member of that commission had recently been in this city making investigations, and found that the Boston supply was much inferior to their own.

DR. JEFFRIES said the manufacturers wanted water for business purposes, and to this fact is due the vast consumption of water in Boston. We should have good water for cooking and drinking purposes, even if it be necessary to cut off the manufacturers, and to say that we want it is only just. The city officials are apt to be satisfied with the existing status, and if we wish to get any result we shall have to work for it constantly. We can get the requisite laws passed when the city decides what it wants. The proposed resolution is fair and legitimate. The water is bad, and has been worse, and the agitation should be kept up until the water is made satisfactory.

The resolution [1] was then adopted by a unanimous vote, and the secretary directed to transmit it to the commission.

SUB-CORACOID DISLOCATION OF THE HUMERUS.

Dr. M. H. Richardson showed a specimen of dislocation of the humerus. Nothing was known of the history of the case. The acromion had been fractured, apparently by a fall upon it, or by direct external violence from above. The tip of the process had been violently depressed, and by the same blow the head of the humerus had been knocked from the glenoid cavity downwards and forwards. At the same time the glenoid cavity itself had been fractured.

The head of the humerus had made for itself a false socket, and moved freely in it. It was interesting to observe that the brachial plexus and axillary vessels were directly pressed upon by the humerus, and their normal course considerably interfered with. There was no wasting of the muscles of the fore-arm to suggest paralysis. The supra and infra spinatus, however, were in a state of very great fatty infiltration.

The head of the humerus itself had not escaped injury, it being fractured through its surgical neck.

◆

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, NOVEMBER 23, 1882. The President, DR. JAMES TYSON, in the chair.

GREAT HYPERTROPHY OF THE HEART DUE TO SEVERE VALVULAR LESIONS.

Presented by DR. M. O'HARA.

J. H., male, aged thirty years, laborer, contracted syphilis when eighteen years of age. Health good until within past three years, when he began to suffer from pain in the left breast, palpitation of the heart, and slight dyspnœa after violent exertion. Gradually becoming worse and unable to work, he was admitted into St. Mary's Hospital in June, 1882. He then complained of great pain over the upper part of the sternum, in the left arm, and shoulder. He lost considerably in weight, his appetite was poor, and albumen was present in small proportion in his urine, although casts were absent. He had marked dyspnœa on admission, which increased rapidly until sleep could only be obtained in the upright position. There was no evidence of pulmonary trouble. With the fore-arms flexed to a right angle the brachial arteries became prominent at each impulse of the heart; the pulsation of the carotids was wavy and prolonged; the temporals were tortuous and visibly pulsated; no retinal arterial pulsation was seen. Retinal venous pulse was marked, but no visible venous pulsation was detected elsewhere. The left præcordial region was specially prominent. The apex beat was most distinct in the sixth and seventh interspaces on a perpendicular line running midway between the left nipple and anterior border of the left axilla. The heart's impulse was usually forcible and diffused, but at times it became weakened and wavy. In the second left intercostal space a systolic impulse was observed. The pulse varied from 80 to 120 per minute, struck the finger with considerable force, but at once lost most of its volume. All these phenomena were exaggerated by raising the hands above the head. The radial pulses were unequal, but the brachial arteries presented no differences. No hepatic pulsation was felt. The cardiac area of complete dullness was nearly twice its normal size, the increase being downward and to the left. Over the second right costo-sternal articulation the closure of the aortic valves was distinctly heard, and with this a slight diastolic murmur. A systolic murmur was also heard over the same spot. The systolic murmur was nearly lost in the carotid and sub-clavian arteries, but the diastolic one remained distinct. On a line with the second costal cartilage over the sternum, and to the left of this bone, the diastolic and systolic basic murmurs were most intense. Over the cartilage of the left fourth rib the murmurs heard at the base of the heart were less distinct, or were observed by the development of other murmurs. In this situation, a short, sharp, presystolic murmur, apparently prolonged into a systolic one, was detected. At the apex, and just above it, the systolic murmur became intensified, its blowing character aiding in differentiating it from the short harsh murmur which immediately preceded it. From the fourth to the seventh rib, and from the sternum to a point about five or six inches to the left, a diastolic murmur of considerable intensity was heard. The character of the diastolic murmur over this area was different from that presented by the second sound murmur at the base of the heart, and its intensity was much greater. Posteriorly, at the lower angle of the left scapula, a blowing systolic murmur, entirely deprived of its harsh presystolic complication, was heard. Dr. Eskridge thought the physical signs justified him in venturing the diagnosis of constriction and regurgitation at the mitral orifice; a rare form of aortic regurgitation produced by the inability of one of the aortic semilunar valves to close while the others acted properly, great hypertrophic dilatation of the left ventricle, and to a less extent of the left auricle, and aneurismal dilatation of one of the great vessels, probably of the pulmonary artery near its origin from the heart. The patient rapidly sank, and œdema of the lower portion of the trunk and lower extremities with hydrops pericardii pleuræ et peritonæi developed. He died exhausted in August, nearly two months after admission to the hospital.

---

[1] See page 452.

Sectio Cadaveris. — *Brain.* Some venous congestion of the pia-mater. The brain substance and the ganglia nearly normal in appearance. *Thorax.* The pericardium was nearly filled with serum. The only evidences of inflammation were a few patches of recent lymph at the left anterior upper portion of the sac. The heart weighed eighteen ounces, the increased weight being chiefly due to eccentric hypertrophy of the left auricle and ventricle. The right ventricle was dilated, with slightly thickened walls. The aortic valves were insufficient and thickened. The posterior leaflet was normal in shape, but the others curled upon themselves on the aortic side of the orifice. The stenosis was slight. The mitral orifice was button-hole shaped, and the valves failed to close on account of calcareous deposits in their tissues, this degeneration also involving the inner surface of the left side of the auricle contiguous to the valves. The auricular surface of the valves was fairly smooth, but in the ventricle just beyond the valves and attached to them hung a bony substance about one eighth of an inch in diameter. The left auricular appendix was much hypertrophied. The valves at tricuspid and pulmonary orifices were normal. The pulmonary artery was considerably dilated. The pleural cavities contained several ounces of serum. There were old adhesions at the apex of the right lung posteriorly, and at the same part of the left lung anteriorly. Several patches of recent lymph were also found at the lower part of the left pleural cavity. *Abdomen.* The peritoneal cavity contained considerable serum and its veins were engorged. The liver was enlarged with distended veins. The kidneys were highly congested. The spleen was double its normal size, and softened.

ABSCESS OF THE LIVER FOLLOWING ARRESTED MENSTRUAL DISCHARGE FROM EXPOSURE TO COLD; PYÆMIC ABSCESSES OF THE LUNGS AND SPLEEN; PERFORATION OF THE BOWEL; SEVERE HEART COMPLICATIONS; DEATH DURING THE SEVENTH WEEK.

Presented by DR. J. T. ESKRIDGE.

M. D., aged twenty-eight years, was a factory girl whose father and two sisters had died from heart disease. She had had two attacks of inflammatory rheumatism, but had never complained of heart trouble. Her fatal illness began at night, by arrested menstrual flow and severe cramping abdominal pains, coming on after exposure to cold during the previous afternoon. Fever and pain in the right lower side of the abdomen continued for three days, when she was able to work again for about a week. Jaundice began early, was well marked during the first three weeks, was slight afterwards, but lasted until her death. Her symptoms three weeks after the beginning of the attack, when admitted into St. Mary's Hospital in Dr. Hickman's wards, were great prostration, emaciation, loss of appetite, pain in the right inguinal and lumbar regions, and irregularly recurring chilly sensations. Two weeks later, when first seen by Dr. Eskridge, the liver dullness extended nearly to the anterior superior process of the ilium, and the normal tympanitic note of the right inguinal region of the abdomen was replaced by one bordering on dullness. The tenderness was so great that neither fluctuation nor a tumor could be detected, if such existed. Great tympany soon developed and obscured the physical signs. A pyæmic condition from which the patient perished in about two weeks set it, attended by chills, fever, sweating, low temperature, and diarrhœa. A few days before death she passed considerable pus by the bowels. The surface temperature taken over the chest and abdomen showed the latter to be about two degrees warmer than the former, but all parts of the abdomen were of nearly the same temperature. Stenosis of the aortic and mitral orifices with insufficiency of the valves of the latter and dilated hypertrophy of the left auricle and ventricle were recognized during life. The post-mortem examination revealed the diagnosticated lesions of the heart, and demonstrated the possibility of visible left auricular pulsation. The liver weighed eighty ounces, (the right lobe being alone enlarged), and contained a large abscess surrounded by several smaller ones with which it was connected. The cæcum and its appendix were surrounded by about six ounces of pus, the latter being circumscribed by adhesions. Two openings were found in the black and gangrenous cæcum, one where its appendix had sloughed off, the other due to perforation of the bowel by the pus. The portion of the liver external to the hepatic abscess was firmly adherent to the abdominal wall, and from this point (about two inches above the crest of the ilium) the pus had burrowed its way and formed a sinus leading to the right inguinal region under Poupart's ligament. A direct communication between the liver abscess and the accumulation of pus surrounding the cæcum was seen.

DR. ESKRIDGE thought that the demonstration of the possibility of visible left auricular pulsation in the second left intercostal space, and of the occurrence of a functional murmur in the pulmonary artery without dilatation of that vessel, was worthy of notice at present, as Dr. Broadbent had so recently advocated views almost diametrically opposite. Dr. Eskridge considered mitral stenosis of not infrequent occurrence, and said that with care the mitral presystolic murmur was not usually difficult to detect. The four physicians, including himself, present at the autopsy, then thought that the hepatic abscess was secondary to the inflammation and suppuration around the appendix and cæcum, but he, after carefully analyzing the clinical evidence and pathological lesions in favor of each condition, was satisfied that the case began as one of primary abscess of the liver following exposure to cold while the patient was menstruating.

The discussion on both the preceding specimens, which presented somewhat similar heart lesions, was now opened by

DR. J. C. WILSON, who said that there was one point of special clinical interest in Dr. Eskridge's case, namely, the chronology of the lesions. He thought that the extensive multiple abscesses of the liver and lungs were secondary to the abscess around the caput coli. In some cases the determination of the primary source of the emboli was difficult, but in this case it was perfectly clear.

DR. BRUEN said that he would like to go on record among those who had observed auricular pulsation in cases of mitral obstruction in which the stenosis was extreme.

DR. NANCREDE remarked that in his experience flexion of the thigh on the abdomen was an almost invariably early symptom in cases of perityphlitis, from which he would infer, that as this thigh flexion did not occur in Dr. Eskridge's case until within ten days of the fatal termination of the case, that the pericæcal abscess was secondary to that in the liver

DR. TYSON said that he had been much impressed with the marked increase of the surface temperature in the neighborhood of the abdominal abscesses as compared with the general body temperature. As to the chronology of the various affections he was inclined to believe that Dr. Wilson was correct.

DR. ESKRIDGE said, in reply to Dr. Wilson, that he could appreciate how the perityphlitis might be mistaken for the primary trouble, and the hepatic suppuration for the secondary; such a mistake (for he felt certain that the abscess of the liver was the primary affection) was made by all, including himself, who were present at the post-mortem examination. The pathological and clinical facts in favor of primary hepatic abscess were given at some length in his remarks in connection with the presentation of the specimens. In brief the clinical features were as follows: Deep and early jaundice following exposure to cold, pain in the right side of the abdomen attended by fever and gastric irritability of a few days' duration, an intermission of a week, during which she was able to work, followed, after which gradually increasing weakness, with dull abdominal pain, attended by loss of flesh and appetite, confined her to bed; ten days before death the development of intense tympany associated with flexion of the right thigh upon the abdomen. The hepatic suppuration was confined to the right side of the right lobe, all the smaller abscesses directly communicating with the large one, and the left lobe of the liver being apparently healthy.

(*To be concluded.*)

◆

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

THE SUMMER VACATION IN THE PUBLIC SCHOOLS.

AN adjourned annual and a stated meeting of the Society were held November 27th. Reports of a number of committees were made, and among them one by **DR. A. JACOBI**, who had been appointed to report upon the advisability of changing the length of the summer vacation in the public schools. The subject came before the Society by reason of a petition by members of the Harlem Medical Association to the Board of Education, which asked that the vacation, which now begins about the 3d of July and continues until September 1, should commence two weeks later, and end two weeks later, on account of the dry and unhealthy weather of the first half of September. Dr. Jacobi was opposed to closing the schools two weeks later than at present, and recommended in his report that the Harlem Medical Association should unite with the County Society in asking the Board of Education to take such steps as will result in securing a change in the laws, so that the summer vacation in the public schools shall extend from not later than the 3d of July to the middle or latter part of September.

IRREGULAR PHYSICIANS.

DR. F. R. STURGIS, the retiring President, delivered an address in which he reviewed the work of the past year, and spoke especially of the success which had attended the efforts of the Society in its attempts to break up the practice of irregular physicians. He recommended that the Society should appoint a committee to attend the sessions of the Legislature at Albany, in order to prevent legislation being rushed through, which would be injurious to the members of the profession and the public at large.

In assuming the presidency for the ensuing year **DR. DAVID WEBSTER** strongly urged the continuance of active measures to prevent quacks and improperly qualified physicians from practicing in the city.

MALARIA IN CHILDREN.

The paper of the evening was by **DR. L. EMMETT HOLT**, on Malaria in Children. The peculiar manifestations of malaria in children, he said, constituted a field of observation which had been too much neglected. The organism of the child was peculiarly susceptible to all acute infectious diseases, and the poison of malaria acted not only more rapidly but more generally and more profoundly in the young than in adults. Again, the susceptibility of the nervous, digestive, and respiratory systems produced such variations in the form and type of the disease as to mislead at times even those most careful in diagnosis. The attacks were sometimes so incomplete and fragmentary that a fatal result might ensue in the masked forms before the diagnosis could be made. The symptoms often came on very insidiously also, and the writer's own experience abundantly confirmed the statement made by Schmiedler that there was scarcely any disease so changeable, so obscure, and so indefinite as intermittent fever in children.

Fortunately, for both the physician and the patient, when once the diagnosis was established, prognosis and treatment usually presented no difficulties, and he should, therefore, confine himself in the paper to symptomatology and diagnosis. His experience was drawn from 184 cases, nearly all of which he had observed at the Northwestern Dispensary, which was situated in a district acknowledged, as he believed, to be the most malarious in New York. For a considerable portion of its extent it consisted of made ground for a distance of from one to two blocks from the Hudson River, which formed its western boundary; while one large pond and several small streams had been filled up in its upper part. The invasion of malaria, he continued, was much more frequently gradual in children than in adults. In 117 cases in which he had recorded the manner of onset, it was abrupt in 45 cases, and gradual in 72. In the abrupt cases the symptoms noted were convulsions, vomiting, drowsiness, prostration, fever, and severe pains in the head and epigastrium, less frequently over the liver or spleen. In the cases with a gradual invasion he had noted anæmia, frontal headache, constipated bowels, or diarrhœa (more frequently the former), complete anorexía, muscular weakness, pallor or yellowish hue of the countenance, with dark rings around the eyes, nausea, with occasional vomiting, tongue heavily furred and of a dirty brownish color, epigastric pains and often tenderness, drowsiness by day, restlessness at night, slight cough, and chilly feelings varied by hot spells. In many cases these symptoms recurred rhythmically every day or every other day; but quite as often they occurred without any periodicity. The spleen, in the great majority of cases, but not in all, would be found to be enlarged.

In 106 cases in which the time of the invasion or the exacerbation was noted, it took place in the forenoon in 35 cases, and in the afternoon or evening in 71, a proportion of one to two. The division of the disease into stages, as in adults, he thought might be advantageously dropped altogether. In 150 cases he had noted the chill being present in but 19, and in only about one half of these was it at all pronounced. In almost every instance in which the chill was marked, the child was over eight years of age. In 15 other cases chilly sensations, coldness of hands or feet, etc., were observed; making thus only 34, or a little more than one in five, in which anything resembling a cold stage was present. Fever was one of the most important, and undoubtedly the most constant of all the symptoms. His cases seemed to fall into three groups in this connection: (1.) Those in which the temperature rose quite high at the outset and remained so with very little variation for 24, 48, or even 72 hours, when a marked remission occurred, and the fever thereafter assumed a distinctly remittent type; (2.) Those in which the fever was at first slight, but gradually increased in its intensity until it might become a continuous fever, usually with slight daily remissions; (3.) Those in which the fever assumed a distinct character, either remittent or intermittent, from the outset. The last was the rarest form. His opinion was that the general impression regarding the temperature estimated it too high. In only 26 cases, or about one seventh of the whole number, was it above 104°F. before the use of quinine. In only three cases did he see it above 106°F. and the highest recorded was 106¾°F. Sweating was noted in a little more than one fourth of the cases, and was thus found to be more frequent than the cold stage; though it came later, and was very much less marked than in adults. Cerebral symptoms of some form or other could be said to be the rule, having been noted to be present in 97 out of 150 cases. Pain in the head was the most frequent, and was found to be almost invariably frontal, in children old enough to describe their sensations. He had no doubt in his own mind that some of these were cases of supra-orbital neuralgia. The next most common head symptom was drowsiness, and this was usually noticed to come on at some particular part of the day. Convulsions were recorded in four cases, all of which terminated favorably, and only one of which was especially severe. Pains in other parts of the body than the head were usually complained of by children who were old enough to talk, and the most characteristic of these was pain at the epigastrium, which was found to be present in 101 patients out of 128. In 29 cases epigastric tenderness was also noted. The epigastric pain he believed to be neuralgic and dependent perhaps on congestion of the stomach, which was found as one of the lesions in most of the fatal cases. Splenic tenderness was more frequent than splenic or hepatic pain, and was noted in about one fifth of the cases. The spleen was found enlarged in 64 out of 79 cases. Disturbances of the digestive system were almost uniformly present, and usually pronounced. Vomiting, which was noted in 78 out of 112 cases, most frequently occurred at the onset of the paroxysm, and in 19 it was persistent. The condition of the tongue was to be regarded among the diagnostic symptoms, and the typical tongue was normal or slightly reddened at the edges and tip, while the centre was heavily furred and was of a brownish-yellow color, shading off into a dirty white. A clear tongue he noted in only nine cases. In the simple cases there were no thoracic symptoms beyond a little cough from bronchial catarrh, which was exceedingly common; but occasionally the poison seemed to be localized chiefly upon the lungs, giving rise to very obscure and very threatening symptoms. Symptoms referable to the genito-urinary system were noted in 17 cases, in most of which the urine was examined with negative results. Nephritis, however, was met with in two cases.

Among the complications of malaria affecting the respiratory system were mentioned bronchitis, pulmonary congestion, a kind of pseudo-pneumonia, true pneumonia, and spasmodic asthma. Of those affecting the nervous system were mentioned, neuralgia, hyparæsthesia of the lower extremities, paresis of the same, and chorea.

In the matter of diagnosis, enlargement of the spleen was considered, without doubt, more important than any other single symptom, and next in value the writer would place the elevation of temperature. The recognition of the irregular or masked forms of the disease was often more difficult, from the fact that the frequent dependence of the disorders referred to was not appreciated even in a district so malarious as that of New York. The presence of malaria was to be determined by the following points: (1.) Periodicity in the symptoms. (2.) The coexistence of splenic enlargement. (3.) The failure of the usual remedies to relieve the symptoms. (4.) Their prompt disappearance under the administration of quinine. Typhoid fever and malaria were undoubtedly often confounded, and the frequency with which diarrhœa occurred in malaria, the slight bronchitis, the enlargement of the spleen, and the abdominal tenderness occurring in both, made the diagnosis extremely difficult in many cases.

The following conclusions were drawn by Dr. Holt from his observations on the subject: (1.) Malaria in early life presents symptoms as distinctive as any other disease in children. (2.) The classification of the cases as remittent or intermittent, and the division into hot, cold, and sweating stages, leads to misapprehensions regarding the course of the disease, and confusion in diagnosis. (3.) In any acute febrile disease presenting an unusual course, the spleen should be examined. (4.) In obstinate cases of diarrhœa or bronchitis not affected by ordinary remedies, malaria should be investigated as a possible cause. (5.) Spells of drowsiness and frequent attacks of epigastric pain should always excite suspicion. (6.) In children it is even more necessary than in adults to carefully interrogate every organ before making a diagnosis when the symptoms are at all obscure.

Recent Literature.

The Physiology and Pathology of the Blood. By RICHARD NORRIS, M. D., F. R. S. E. London: Smith, Elder & Co. 1882.

In this book the author embodies the results of original investigations made during the last five years, parts of which have been previously published. A brief *résumé* of the leading ideas developed in the book is as follows: —

There exist in the blood of mammals a large number of corpuscles which have the same color and refractive index as the liquor sanguinis. These new corpuscles have important relations, on the one hand, to the well-known red discs, and on the other to the corpuscles of the lymph and spleen. In addition, it appears that the abnormal deviation of these newly-discovered elements gave rise to fibrine in its various forms of films, net-work, and thrombi; that they are in fact the cause of coagulation generally. Further, it can be demonstrated that the lymphatic glands, the spleen, the thymus, the thyroid, and the red bone marrow yield to the blood as their most developed product *smooth free nuclei*, which appear at first as these colorless discs, and subsequently by the gradual attainment of color become the red corpuscles. The white cells of the blood represent the leucocytes which failed to throw off their envelope and set free their nuclei.

If this view is correct, leukæmia and anæmia are to be considered in a different light from heretofore. The first is due to a failure on the part of the glands to properly set free and develop the nuclei of the primary lymph corpuscle, and as a consequence there is an excessive amount of white corpuscles in proportion to the red. The manner of the production of anæmia is less simple. He first shows, by a series of calculations based upon the number of corpuscles in a cubic millimetre of blood, that the mode of arrangement in the individual corpuscles is such as to be consistent with a view which considers the corpuscles to begin their career in a colorless state, and to assume equal increments of hæmoglobine in equal times. We are thus enabled to explain how it comes about that corpuscular deficiency is associated with a greatly disproportionate loss of hæmoglobine, and to show that this rests in a definite law, to which, with certain reservations, all cases of anæmia may be referred.

It is impossible in the space of a review to criticise all the points presented in the book. Against these views have been urged that the invisible cells are simply decolorized red discs, or that they are masses of coagulated material which have assumed this shape from being imprisoned between other cells. Moreover, the direct escape of the nucleus from the primitive lymph corpuscle has never been directly seen, although there are strong grounds for the belief that it does escape.

The facts are certainly new and of great interest, especially as having a most important bearing upon our conception of the diseases of the blood.

The subject, from a histological point, appears a comparatively simple one to prove or disprove, and although the ground must be thoroughly fought over point for point, yet it is a question which can be definitely settled within a short time.

All who are interested in minute anatomy should read this book, in which there is a great deal of needless repetition and rather involved writing. The methods certainly show originality, and all the points are illustrated by micro-photographs, of which there are some two hundred. The value of these for representing objects which can be sharply defined in one plane is well shown here, the reader feeling as if he were dealing directly with the specimens themselves, and this, as can well be imagined, adds weight to the arguments.

The publishers have done their part of the work well, and the subject loses nothing from being so handsomely dressed.

Some Practical Observations on Vaccination. By W. H. WHITEWAY WILKINSON, L. R. C. P. Ed. London: J. & A. Churchill. 1882.

A few weeks since we noticed a little book by an American writer upon the essentials of vaccination. That treated almost entirely of vaccination with animal virus. The present *brochure* comes from England, and treats entirely of vaccination with humanized virus, the writer's experience having been confined to that. He has been a public vaccinator in London for thirteen years, and has vaccinated nearly twenty thousand people, which facts he pleads as qualifications for speaking on the subject.

Medical and Surgical Journal.

THURSDAY, DECEMBER 14, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly b HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

NEW ANTIPYRETICS.

THOSE who are interested in the advance of therapeutics from its scientific side cannot fail to be gratified by the work which has been done by the eminent chemist Dr. Otto Fischer and his associates, Professor Filehne and Dr. Wilhelm Koenig.[1] That quinoline, a substance which has been made artificially, and quinine are closely related is well known, and it was probably this which suggested the recent unsuccessful trial of quinoline as a substitute for quinine.

The richness of quinine in hydrogen, as well as later investigations, have shown chemists that there exists in the quinine molecule not simple quinoline, but quinoline combined with hydrogen. Accordingly Drs. Otto Fischer and Wilhelm Koenig, of Munich, hoped to discover bodies having an action similar to quinine by making synthetically various new substances, starting with the quinoline-hydrogen compound, A variety of combinations by methods of interest only to chemists gave them a long series of substances to which they are still making additions. The preparations they made were given to Professor Filehne to try in the clinic. These investigators have worked together nearly two years, attempting to discover in what way modifications of the structure of the substance should be brought about in order to produce an antipyretic drug. It is sufficient for our purposes to say that this was realized in a substance which they have named "kairin," and in another called "kairolin," as well as in a third, bodies all similar in their chemical structure.

As the manufacture of the last two is attended with many difficulties, and as they have an unpleasant taste and are deliquescent, kairin alone was given further trial.

The chlorhydrate of kairin is a crystalline, nearly white, powder, readily soluble in water; it has a mixed salt, bitter, and aromatic taste.

It has been given to adults in a series of acute and chronic cases. In strong, healthy persons one to one and a half grammes (fifteen to twenty-two grains) do not cause headache, ringing in the ears, or any discomfort; in feeble subjects more than one gramme (fifteen grains) every two hours may cause a cyanotic appearance. The dose which is preferred is 0.3 to 0.5 gramme (five to seven grains) hourly; its effects continue only two or three hours, so that it is necessary to give it frequently. A dose of 0.3 to 0.5 to one gramme (five to seven to fifteen grains) causes the temperature to sink from one half to two degrees or more; if this is repeated before the action of the first dose has ceased the temperature is still further lowered, and may even be brought to normal without unpleasant accompaniments.

The action of the medicine begins about twenty-five minutes after being ingested; the fall in temperature is more abrupt the larger the dose. In every case the fall in temperature is accompanied by free perspiration, which continues only while the temperature is falling. As soon as the lowest point has been reached, which occurs after from two to four doses, diaphoresis ceases, and the temperature remains constant so long as one chooses to give kairin. During the diaphoresis, as well as after it, the patients are much relieved, especially those suffering from croupous pneumonia; in this disease not only is the temperature reduced, but the respirations and pulse are made much less frequent; the pulse is strengthened and the pleuritic pain lessened by this drug. As soon as it is omitted for two or three hours, according to the size of the last dose, the symptoms return as before, the temperature rises to the height characteristic of the disease, and is accompanied by a chill. Further and more numerous observations will have to be made to determine whether this drug may have a specific action in pneumonia.

The urine is of a dark-green color with all of these drugs, and sugar and albumen are absent. A very troublesome feature is that unless kairin is administered every two and one half hours a chill occurs; but being aroused every two hours, if one may sleep free from fever during the intervals, may well be endured. This inconvenience may be partly overcome in various ways, but as soon as kairolin is to be had a full dose of it instead of kairin may be given to the patient before going to sleep. The action of kairolin comes on more slowly and continues six hours; at the end of this period the temperature rises gradually, and is not accompanied by a chill.

As kairin has been found to allay fever in various acute and chronic diseases without fail, and always in the same manner, it may be found effective in intermittent fever. No extravagant claims are made for kairin, and the investigators desire to await the result of careful observation and trial of its usefulness by the profession.

◆

JOHNS HOPKINS UNIVERSITY. SEVENTH ANNUAL REPORT.

THE Seventh Annual Report of the president of the Johns Hopkins University at Baltimore presents a favorable review of the work done in its various departments since the opening in 1876, and shows the University to have passed "out of the stage of prospectus into the stage of existence."

The academic staff during the past year included forty-three teachers, seven of whom were non-resident lecturers. In addition to this staff five professors, not otherwise connected with the University, acted as examiners in particular subjects where their judgment was sought. The number of students enrolled during the year was one hundred and seventy-five, of whom ninety-seven were residents of Maryland, and sixty-eight came here from twenty-one States of the Union, and ten from foreign countries. Among the students were ninety-nine already graduated, coming from fifty-two colleges and universities; there were forty-five matriculates (or candidates for the degree of bachelor of arts), and there were thirty-one admitted as special students to pursue courses of study for which they seemed fitted, without reference to possible graduation. The daily attendance upon eighty-three public lectures was one hundred and thirty-seven. The number registered at the opening of the present academic year is one hundred and ninety-two, of whom one hundred and ten are graduate students.

---

[1] Ueber neue Mittel, welche die fieberhafte Temperatur zur Norm beringen. Dr. Wm. Filehne, a. o. Professor d. Brzneimittellehre zu Erlangen. Berlin. klin. Wochenschr., November 6, 1882.

The University Register for the past six years shows that four hundred and forty-nine individuals have been enrolled as students, of whom two hundred and fifty-one have come from Maryland (including two hundred and four from Baltimore), and one hundred and ninety-eight from thirty-five other States and countries. Of this number two hundred and seventy-five persons pursued courses as graduate students, and one hundred and seventy-four as collegiate students.

The University has become a sort of national seminary for the training of teachers, over one hundred of those there taught having become professors and instructors in colleges, academies, and schools. But this is not the only calling for which young men are prepared. Seventy-eight are physicians and students of medicine; thirty-one are clergymen and students of theology; twenty-nine are lawyers and students of law; forty-three are engaged in business (as chemists, engineers, electricians, manufacturers, merchants, etc.); and a few have entered the scientific service of the United States government.

The medical department of the University is not yet organized, but a number of students have been taught physiology and morphology before going to professional schools.

According to the Report the course of studies recommended to students who expect to become physicians (quite distinct from and antecedent to the strictly professional study of medicine, but quite as essential in these days to the liberal education of a medical man) is made up of physics, chemistry, and biology, with the addition of Latin, mathematics, psychology, and English literature, and with at least sufficient knowledge of German and French for the perusal of scientific works which are written in those languages.

The number of students in biology was twenty-six in 1878–79, and thirty-two in 1881–82. Graduate instruction is given in zoölogy and comparative anatomy, and, in addition to the facilities afforded in the biological laboratory, a marine station for zoölogical research has been maintained upon the sea-board during the last five years. A new method of studying the mammalian heart, devised by Dr. Martin, by which it is expected that new light may be thrown upon various questions of cardiac physiology, is one of the results of the biological laboratory.

CHANGES IN THE MASSACHUSETTS BOARD OF HEALTH, LUNACY, AND CHARITY.

Dr. Alfred Hosmer has resigned his position as a member of the Massachusetts Board of Health, Lunacy, and Charity, and Dr. H. P. Walcott has resigned as health officer of the Board. Dr. Walcott has been appointed to fill the vacancy caused by Dr. Hosmer's resignation, and Dr. S. W. Abbott, of Wakefield, to fill that caused by Dr. Walcott's resignation.

Dr. Hosmer has been a member of the Board for less than two years, and has been chairman of the Committee on Health. During that time he has endeavored, as far as the peculiar composition of the Board permitted, to be of service in promoting the sanitary interests of the State. The same remark is applicable to Dr. Walcott's discharge of the duties of health officer. Since his appointment in June, 1880, Dr. Walcott has always shown himself courteous, assiduous, and thoroughly competent, though the executive officer of a board whose aim seems to have been to preserve a masterly inactivity in matters relating to the public health. He will make a valuable member of the Board if allowed an opportunity, but unless it be strengthened or reorganized in some way we fear no competent man with a single eye to State medicine and without political or other interests to consider can be induced to remain long upon it, even though willing to make the best of the present order of things. With some excellent papers now on hand ready for publication, the Annual Reports of the Health Department have quietly been allowed to come to an end.

Dr. Abbott is an excellent appointment to succeed Dr. Walcott as health officer. He is a well-known member of the Massachusetts Medical Society, a contributor to this journal, and has been an active practitioner and medical examiner at Wakefield. He has published several papers on matters connected with public hygiene, notably on vaccination.

The old Board of Health, though active and able, did not by any means exhaust the discussion and regulation of State medicine in Massachusetts; there still remain questions of the gravest moment and greatest difficulty which will sooner or later inevitably demand solution.

MEDICAL NOTES.

— In an account of the Farewell Lecture of Dr. O. W. Holmes, one of our enterprising contemporaries speaks of the retiring professor as having contracted from the printer's type "the disease of authors, *head*-poisoning, which he had never quite got rid of. The doctor finished with some practical remarks on the way in which the science was tending."

— Sir James Paget, the eminent English surgeon, when near his country house recently, witnessed a severe accident by which a man's leg was broken. Sir James helped the man into his cart, and proceeded to attend to his injuries. The driver's companion ran to the local doctor, and cried out: "Please, sir, Bill has been and fallen out of the cart and got his leg broke; there's an old cove a-pulling of him about, but I can see he ain't up to much, so I wants you to come at once, sir, 'cos Bill's wery bad." The doctor hurried to the spot, and found that the "old cove" was quite competent to act in the emergency. Sir James had made some rough splints, and used a copy of the *London Times* to bind up the leg. Criticism of medical skill, as often happens, came to grief, and Sir James learned once more that fame has its limitations.

— The method of abolishing nefarious practices in giving degrees is stated by the Commissioner of Education as follows: "The only way to anticipate and circumvent these attempts is to declare all educational charters, heretofore issued and not now in active and reputable use by responsible corporations, void and defunct after a specified time; to enact laws forcing persons who wish to obtain charters for institutions of collegiate or professional character to give heavy bonds for their proper use; and, finally, to discourage the practice of conferring honorary degrees save under careful restrictions."

— A British contemporary, commenting on the article in the October *Harper's* on Medical Education in New York, considers the personal descriptions it contains to savor of advertisement of the professors. The journal referred to says (it is to be feared with no less truth than complacency), "America, as we all know, is the land of quackery," and refers with sharp criticism to the fact that "charlatans, some holding diplomas, others ignoring them as worthless, are all legally qualified to exercise the divine art of healing." The medical students who flock to that mart of diplomas are spoken of as a "mixed set," of which a part are young men of lowly antecedents, whose ambition leads them to put up with privations which a day laborer would not endure, and another portion consists of young men of fashion, who are apt, like the student in Pickwick, to be "lawless, exuberant, and addicted to nocturnal disorders."

— In India last year snakes killed no fewer than 18,670 human beings, while wild beasts destroyed 2759 more. Further, 43,609 head of cattle were killed by the same agents.

— The use of tobacco among boys in the educational institutions of the United States government has attracted the attention of the surgeons in charge. It is said that an energetic opposition to this practice is being made, for instance, in the Naval Academy at Annapolis and the United States Military Academy at West Point. The naval surgeons, and especially Dr. Gihon, U. S. N., have been the principal movers in the opposition, alleging that tobacco (1) leads to impaired nutrition of the nerve-centres; (2) is a fertile cause of neuralgia, vertigo, and indigestion; (3) irritates the mouth and throat, and destroys the purity of the voice; (4) produces defects of vision; (5) causes a tremulous, hard, and intermittent pulse; (6) develops conspicuously irritability of the heart; and (7) retards the cell-change on which the development of adolescence depends.

◆

MEDICO-LEGAL NOTES.

THE full Supreme Bench of the State of Michigan, in reversal of the rulings and findings of a lower court, have given a decision of interest to the medical profession. A surgeon being called in consultation to a case of compound fracture of both legs below the knee, advised amputation of both extremities, which was refused. One leg was amputated, and the other finally recovered with deformity. The plaintiff sued for his pay, and the defendant claimed malpractice. The decision of the Supreme Court establishes the following points: —

There is no presumption of law as to the value of a surgeon's services, nor that a jury can ascertain their value without testimony from persons knowing something about it. Nor has a jury a right to reduce the compensation claimed for such service where undisputed testimony shows it to have been appropriate, and on their own unsupported notions that the treatment adopted should have been different.

A jury has no right to ignore testimony that has not been discredited, and form independent conclusions, without testimony, on matters that require proof beyond their conjectures or opinions.

The fact that a surgeon changes a course of treatment adopted by another does not in itself show that the former course of treatment was not proper at the time; nor is the patient's failure to recover perfect soundness of limb in itself evidence of malpractice, nor is the fact that he survived, although he refused to allow a particular course of treatment, evidence that such course might not have been proper under the circumstances.

The jury in an action for the value of surgical services has no right to find malpractice without testimony from persons who are qualified to give opinions on the methods of treatment.

Miscellany.

LETTER FROM BALTIMORE.

MR. EDITOR, — The first snow of the season fell a few days since, leaving behind it a slight increase in the number of cases of bronchial catarrh, laryngitis, pharyngitis, etc.

On the other hand, there has been a corresponding decrease in the small-pox cases, but that is doubtless in great measure due to the rigid course pursued by the City Fathers at their last session, and reasonable hope now exists that in the near future Baltimore will be rid of the scourge altogether. About one hundred and fifty cases still remain.

The new "Infectious Diseases Ordinance" has occasioned much favorable criticism and comment in medical circles; although the power conferred upon the health office is very great and the wording of some sections of the ordinance apparently harsh and stringent, nevertheless its justice is conceded by all. The first sections relate to reporting cases of contagious or infections diseases to the Commissioner of Health by physicians, keepers of all hotels, boarding-houses, and the agents and owners of all tenement houses or private residences or dwelling houses having any person or persons on the premises suffering from or afflicted with small-pox, yellow fever, cholera, malignant diphtheria, scarlet fever, varioloid, or any other disease, such as measles, that comes under the term contagious or infectious. Said report is to be made in writing within twenty-four hours.

Section 4 embraces commissioners, managers, principals, or other persons, or head officers of each and every public or private institution or school in the city. Then follow clauses touching masters and officers or consignees of vessels, providing for quarantine, and forbidding the landing of any skins, fish, rags, bones, hides, or similar material coming from any infected place; also the selling or exchanging or exposure of any straw, bedding, clothing, or articles liable to communicate any contagious disease, without a written permit from the Commissioner of Health. It is also forbidden to transport from place to place persons having the diseases in question, and ambulant patients are deprived of personal liberty; further, no public vehicle can be used for such transport, and in case of death in any conveyance for public hire such hackney coach, buggy, cab, or gig shall be taken by the Health Commissioner, disinfected, fumigated, and quarantined for thirty days, unless used for such purpose only.

The ordinance likewise confers power upon the health office to remove any sick or infected person to the hospital. Yellow flags are to be displayed upon all infected premises.

Vaccination is made compulsory. The health office have facilitated the carrying out of the above by sending to every regular practitioner postal cards with the formula of report printed upon them. The penalty for violating, omitting, neglecting, refusing to comply with, or hindering in any way the provisions of this ordinance is a fine of $200 for each offense, to be collected as other fines are, except that the fine for refusal to vaccinate shall not exceed $10.

The spirit of the ordinance is excellent, and if properly enforced will go far to rid us of small-pox and give more reliable mortality returns.

The Committee on Poisonous Drugs appointed at the last meeting of the Medical and Chirurgical Faculty of the State of Maryland, and consisting of Drs. G. Halsted Boyland, Thomas S. Latimer, and Lewis H. Steiner (senator), are actively engaged in collating material for their report, and examining the English and American laws upon the subject. The object of the committee is to draft a law regulating the sale of opium and its preparations, restricting said sale to the prescriptions of regularly qualified physicians only, with a view to preventing the purchase of large quantities of the drug for suicidal purposes, and to checking the opium habit. This pernicious practice is largely on the increase here; a chemist, in the eastern section of the city, states that five hundred would not cover the number of persons addicted to the use of laudanum in his district alone; he sells two gallons of laudanum monthly in this way. A fashionable apothecary of the West End says that morphia is the preparation preferred in his locality, but few using solid opium, and that about twenty-five pounds of morphia a day are sold by the druggists. The question is a very serious one, both as regards public health and medical jurisprudence. Maryland has, unfortunately, no law touching this, hence the action of the Faculty.

The Academy of Medicine, our most distinguished medical body, has recently been incorporated; it numbers among its members the elder and more brilliant lights. . Regular meetings are held bi-weekly, and no one is eligible to membership unless he has practiced medicine for at least ten years; the papers and discussions are of a superior order. The president, Dr. James Carey Thomas, entertained the members of the Academy at his residence a few evenings ago. An elegant supper was provided, and appropriate speeches made by President Gilman, of Johns Hopkins University, and by Dr. Jno. S. Billings, United States Army, the latter with reference to the inaccuracy of vital statistics.

Work on the Johns Hopkins Hospital buildings is progressing rapidly. The question of finishing some of the wards and having them ready for the reception of patients next year, seems to have been decided in the negative, the trustees deeming it more advisable to wait until all the buildings are completed, and have them, with the Medical School of the University, regularly inaugurated three years hence. The standard is to be so high that only graduates of other schools will be sufficiently advanced to profit by the courses of study proposed; indeed, it is stated on very high authority that the German University plan is the one aimed at. It is nevertheless surmised that its usefulness will be circumscribed, the medical public having a decided penchant for the older institutions of the North, the American curriculum being incompatible with the German idea. In our practical day the student desires to enter as soon as possible that field in which he will learn what is most useful and profitable to him — the practice of medicine; once thoroughly prepared for that, the average American graduate would be inclined to regard the imposition of additional theoretical and scientific studies as attended with double loss, pecuniary and temporal. The new buildings of the University proper, situated at least a mile from the hospital, and on Ross Street, to be used as an addition to the chemical laboratory, are now nearly completed, and a portion already occupied. The present laboratory building, erected in 1874, has a front of fifty-three feet on Ross Street, and a depth of sixty-five feet; the new structures add thirty-two feet to the depth, giving a total depth of ninety-seven feet, thus making the chemical laboratory one of the largest in the country, and its equipments are probably the finest in America. The material used is pressed brick, with ornamental mouldings, trimmed with Cheat River stone, and laid in dark mortar. There are three stories, including the mansard roof. The old laboratory building has also been raised one story. One room is devoted to gas analysis; a room, which can be darkened at will, will be reserved for spectroscopic work; working rooms for students of all grades, fitted with the most improved appliances, etc. There are also separate laboratories for Professor Remsen and Dr. Morse, the associate professor in chemistry; a Fellows' room; lecture rooms, one of which will seat sixty students; a room devoted to mineralogy; private offices, and retiring rooms. A complete apparatus for assaying, and for all the operations of applied chemistry, will be placed in the basement.

There is no longer any doubt that the celebrated

Bluntschli Library will, in a very short time, be secured for the Johns Hopkins University.

The new Baltimore Eye and Ear Infirmary, on Franklin Street, is now open. The building contains fifteen large and well-ventilated rooms, suitably adapted to the purposes of an eye and ear infirmary. The rent is $600 per annum, but the managers and professors are desirous of purchasing the property, which can be obtained for $15,000. Many patients have already been received. The physicians who will attend to diseases of the eye and ear are Drs. Theobald, Russell, Murdock, S. L. Frank, and L. Bermann. Affections of the throat will be treated by Drs. Hartman, Samuel Johnson, and John N. Mackenzie.

At the annual meeting of the Hospital Relief Association of Maryland, held on Monday last, the movement now on foot to inaugurate Hospital Saturday and Sunday was under consideration. The chairman of the committee reported that he had extended an invitation to the Rev. W. G. Baker, secretary and originator of the very successful Hospital Saturday and Sunday movement in New York, to address a meeting of physicians, clergymen, and other prominent citizens of Baltimore. Among the managers are Drs. Alan P. Smith, Riggin Buckler, and H. P. C. Wilson.

A morgue is still one of Baltimore's pressing needs. Dead bodies found within the city limits are now laid out on the floor or benches of the police station house, there to await recognition and claimants. The matter has not yet taken definite form, but public opinion will doubtless soon place it before the city council through the Academy of Medicine or the State Faculty.

The Child's Hospital was formerly known as the Protestant Infant Asylum, and was located beyond the limits of Baltimore. About four years ago the management of the asylum secured the large, substantial building with surrounding grounds on Schrœder Street, covering an entire square. At the close of the war this place was turned from a private estate into the Union Orphan Asylum, where children whose fathers had perished in their country's service were brought up until able to go out into the world. There were one hundred and four children cared for during the last year.

The hospital room, though in the same building, is entirely separate from the nursery. It is a bright, cheerful, airy apartment on the first floor.

In the nursery children are not generally kept after they have attained the age of five, but in the hospital they are treated until cured, and provided for until they are fourteen or fifteen years old. Nearly all the children are cripples, but their general health appears good, and they pass the time happily with a liberal supply of toys, donated by the patronesses of the institution.

◆

THE CENSOR QUESTION OF THE MASSACHUSETTS MEDICAL SOCIETY.

MR. EDITOR, — Dr. Haven, in his reply to my paper on the Censor question, seems disposed to substitute adjectives for argument. He cannot gainsay the fact which I stated that the Suffolk Censors, having twice failed to get a meeting in response to their *invitation*, appealed to the Council to *compel* attendance, though the most "superficial" examination of the By-laws would have shown them that the Council had no such power. If this was not a "step looking to the invasion of district rights," it would be hard to say what was.

Yours respectfully, EDWARD T. WILLIAMS.

DR. HAVEN'S REPLY TO DR. E. T. WILLIAMS ON THE CENSOR QUESTION.

MR. EDITOR, — In Dr. Haven's answer to Dr. Williams's criticism of the action of the Suffolk District Censors, which appeared in the last issue of the JOURNAL, two points were not alluded to which seem of some importance. Dr. Williams considers the Suffolk Censors to blame: (1.) For originating an attempt to change the present mode of examining candidates to the Society; (2.) As being party to, or initiating illegal action on the part of the Council.

The facts are as follows: First, the original action did not come from the Suffolk Board of Censors, but from an out of town Board, presumably, according to Dr. Williams, composed of "old and experienced practitioners." The examiners of the State at large (as the members of the Suffolk Board are *ex officio*) were requested by one of the local boards to initiate the movement. Second, their action did not transcend their defined duties — and was not illegal — as will be seen.

It is self-evident that one member of the Society has a right to ask another member to meet him, and the Censors have, of course, just the same right and can meet informally whenever they wish to.

A member can ask the President, the Secretary, or the Council to issue the invitations. And the Council can of course, in answer to such a request, instruct the Secretary of the Board of Examiners for the State at Large to issue his invitations himself.

This is what was done, and this the position taken by the Council and Dr. Haven, who were as well aware as the member from the Norfolk District that an attempt to coerce the Censors would be illegal. The Council could not compel attendance, and did not attempt to; compulsion implies the power of threatening or inflicting a penalty, and there is no possible penalty in this case. The Council or Dr. Haven can invite, ask, request, or instruct Dr. Williams to come to Boston, or go to New York or anywhere. Such action might be foolish, but would not be illegal. There was, we believe, no illegal action, no attempt, or threatened attempt, to send a regiment of soldiers, or a band of strong men, or a policeman for Dr. Williams, and we have not heard that the latter was even blamed for not coming to the meeting. It is true, however, that his absence was regretted. He would have found that the meeting was not a failure, but an opportunity for informal discussion taken advantage of by a number of members from different parts of the State. At that meeting it was generally admitted that many of the Censors throughout the State were painfully ignorant of their duties, to which generalization, according to Dr. Haven, the chairman of the Norfolk Board of Censors does not furnish an exception.

As a former member of the accused Board of Suffolk District Censors, I should ordinarily feel myself in need of defense when under criticism from one so conscientious and intelligent as Dr. Williams, but in this instance it would appear that his zeal as chairman of a local board has blinded him to the interest of the Society at large, to the facts of the case, and even, according to Dr. Haven, to the By-laws, which should govern him.

I am told by the Secretary that Dr. Williams was also misinformed as to failure of the Censors to respond to the invitation of the Board of Examiners at Large (that is, the Suffolk Board). Forty gentlemen were present at the preliminary meeting, all voting in favor of communicating with the Council in regard to the matter. The result is as mentioned above. This was Dr. Williams's invasion of "one of the few privileges which we have not already thrown away."

Yours respectfully,
E. H. BRADFORD, M. D.

A NEW TEST FOR ALBUMEN.

A NEW test for albumen is recommended in the *Lancet* by Dr. Wm. Roberts, consisting of a saturated solution of common salt slightly acidulated with dilute hydrochloric acid. The saline solution itself causes no reaction, but with an acidulation of five per cent. of the dilute acid one has a most delicate test for the presence of albumen. The method of applying the test is the same as by nitric acid. The cloudy zone of precipitation does not represent a coagulation of albumen as with the acid or by boiling. The precipitate is in fact soluble on free addition of water or of the albuminous urine itself. It is therefore essential to the efficient application of the test that the salt solution should be in excess at the point of expected reaction. This end is secured by pouring the solution down the side of the vessel so as to form a layer beneath the urine. It may also be secured by adding to the suspected urine a volume of the salt solution at least equal to that of the urine in the test tube. If this point be not attended to the test is unreliable. For instance, if acidulated brine be added drop by drop to an albuminous urine, and the mixture shaken up after each addition, the first few drops either occasion no turbidity whatsoever or the turbidity produced disappears on shaking. But when by successive additions the quantity of brine approaches to or surpasses the volume of urine operated on the turbidity remains permanent.

Dr. Roberts goes on to make the following claims for this method of testing: —

"In point of delicacy the salt test stands on a par with nitric acid. The minutest trace of albumen detectable in the urine by nitric acid is also detectable with equal ease by acidulated brine. In high-colored urines the brine test is distinctly superior. In this class of urines nitric acid produces a deepening of the tint, with often a disengagement of gas, which interferes with the sensitiveness of the reaction, but the brine test neither alters the tint nor causes disengagement of gas. On the other hand, I think that nitric acid gives a better idea of the quantity of albumen present by the density of the white cloud produced than does the brine test. In addition to albumen acidulated brine precipitates peptones which are sometimes present in urine; so that occasionally a slight cloudiness is produced by the salt solution where nitric acid and boiling (which do not precipitate peptones) produce no reaction. This distinction in the action of the brine test may hereafter lead to interesting information. In dense urines, highly charged with urates (but not containing albumen), the addition of nitric acid sometimes throws down the amorphous urates in the form of thick white clouds, and it is necessary to apply heat to distinguish with certainty the cloudiness so produced from cloudiness due to albumen. The salt test does not throw down the urates in this way. It is well known that the urines of patients who are taking large doses of resinous substances (such as the resin of copaiba), although free from albumen, yield a cloudiness with nitric acid in the cold, but if the urine be previously made hot nitric acid produces no such reaction. This difference serves to distinguish cloudiness due to resin from cloudiness due to albumen. The brine test also produces a cloudiness in resinous urines, and the reaction occurs whether the urine be hot or cold. To avoid the fallacy thereby arising, all that is necessary is to add an excess of the urine which is being tested. If the cloudiness be due to albumen it disappears on such addition, but if it be due to resin the cloudiness does not disappear on the addition of more urine. One of the chief advantages of the salt test is its incorrosive character. It does not stain nor burn holes in garments and carpets, nor fleck the hands with yellow spots. The use of it makes it possible to arrange a pocket case for urine testing that shall not be a terror to the wearer. From this point of view the substitution of the salt solution for nitric acid will be a real boon to practitioners. The salt test has this additional convenience, that it enables us to test successively for albumen and sugar on one and the same sample of urine. The suspected urine is first tested for albumen with the salt solution, and then Fehling's solution or, still better, a pellet of the solid Fehling's test sent out by Cooper is added, and heat applied. After boiling a few seconds the absence or presence of sugar is ascertained. The admixture of the brine in no way interferes with the copper reaction in case sugar should exist in the urine."

ERRORS OF DIAGNOSIS IN RETROPHARYNGEAL ABSCESS.

DR. ALEXANDER W. MCCOY, in the *Medical News*, reports another case of retro-pharyngeal abscess, and in commenting on this, with his other cases, says: —

"The fact most impressed upon the mind of the writer from the examination of these three cases was that there was a mistaken diagnosis in every case by the attending physician. One case was treated with liniments, etc., nearly four weeks for rheumatism of the neck. Another patient had many opinions expressed by his several attending physicians, none of which were at all correct. The third case appeared to have been treated for tonsillitis, as well as could be determined from the medicine prescribed — tincture of iron and chlorate of potassium.

"These errors in diagnosis, made by good practitioners, appear more surprising to a specialist in diseases of the throat than they do to the general practitioner, because the specialist has peculiar appliances and methods for examination of these affections which are overlooked by the mass of practitioners; noticeably, a good light and palpation with the index finger well into the pharynx. By palpation in this manner, an abscess can hardly be mistaken after pus has formed. In the judgment of the writer all cases of retro-pharyngeal abscess, where no disease of the vertebræ is present, give indications of early formation of pus. In all three cases mentioned in this paper pus had undoubtedly been present for weeks, and had caused, from its accumulation and mechanical interference, a serious train of suffering accompanied by impending starvation, which could have been so readily and promptly relieved. Abscess in this quarter occurs so seldom that the physician is generally off his guard. This fact, coupled with those already mentioned, — insufficient illuminations and incomplete examination of the throat, — makes the mistaken diagnosis almost a certain sequence.

"The treatment consists in prompt surgical interference as soon as pus has formed. The evacuation of the pus can be accomplished best by one or two procedures: evacuation by a small vertical incision as high up as the free border of the soft palate, and not low down at the point of greatest tension, as would be generally selected; or by aspiration, which is a safe and satisfactory method. In infants and children, where exhaustion is always marked, and danger of suffocation from entrance of pus into the larynx imminent, aspiration can be employed with so little risk, and with so much facility, that, in the judgment of the writer, it should supersede all other methods. After the tension of the abscess has been relieved (either by the small vertical incision or with the aspirating needle) and thereby all risk avoided from the flow of pus, the incision can be somewhat extended, or take the place of the needle. An opening lower down can then be safely made if desirable. The writer does not ever advise a free incision, lest particles of food and drink, or atmospheric air, get into the sack. For the same reason he prefers the incision high up and very small in extent.

"The accumulation of pus can be pumped out from time to time, satisfactorily with the finger, until the cavity has become filled with reparative material. It is doubtful if any surgical interference from the outside of the oral cavity, made with a view to reach the abscess, is ever justifiable."

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 2, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhœal Diseases.
New York	1,206,590	584	213	16.08	19.17	6.51	1.03	2.23
Philadelphia	846,984	376	129	21.17	7.23	14.74	1.34	1.10
Brooklyn	566,689	249	111	19.27	24.49	10.04	.80	1.21
Chicago	503,304	183	66	8.73	14.20	—	4.37	.55
Boston	362,535	176	53	19.95	14.25	8.55	1.71	5.06
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	202	77	42.08	5.94	17.85	3.47	3.47
Cincinnati	255,708	97	29	10.31	15.46	4.12	—	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	48	18	16.66	14.58	6.25	—	—
Pittsburg	156,381	70	14	24.90	10.62	4.28	15.71	2.86
Buffalo	155,137	64	32	21.20	12.48	14.04	4.68	—
Milwaukee	115,578	48	22	14.58	14.58	12.50	2.08	—
Providence	104,857	57	10	36.83	10.52	7.02	21.05	3.51
New Haven	62,882	33	9	18.18	12.12	—	9.09	—
Charleston	49,999	30	9	6.66	9.99	—	—	—
Nashville	43,461	20	8	5.00	5.00	—	—	5.00
Lowell	59,485	17	7	29.41	5.88	11.76	11.76	—
Worcester	58,295	20	11	25.00	25.00	10.00	5.00	—
Cambridge	52,740	26	8	11.54	30.77	7.89	—	—
Fall River	49,006	19	10	31.58	10.52	15.79	5.26	10.52
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	7	1	14.28	14.28	—	—	—
Springfield	33,340	8	2	37.50	—	12.50	—	—
Salem	27,598	9	—	11.11	—	—	11.11	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	8	2	37.50	—	25.00	—	—
Holyoke	21,851	11	6	36.36	18.18	18.18	—	9.09
Chelsea	21,785	5	—	—	—	—	—	—
Taunton	21,213	6	1	—	—	—	—	—
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	4	—	25.00	—	—	25.00	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	—	—	—	—	—	—	—
Newburyport	13,537	5	2	—	20.00	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	3	0	33.33	—	—	33.33	—
Eighteen Massachusetts towns	139,078	46	8	13.04	6.52	6.52	2.17	—

Deaths reported 2439 (no reports from St. Louis and New Orleans): under five years of age 860: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 493, consumption 379, lung diseases 342, diphtheria and croup 218, typhoid fever 69, scarlet fever 53, diarrhœal diseases 44, small-pox 33, malarial fevers 23, whooping-cough 21, erysipelas 10, cerebro-spinal meningitis nine, puerperal fever eight, measles five. From *scarlet fever*, New York 14, Brooklyn and Buffalo seven each, Baltimore six, Philadelphia five, Boston and Cincinnati four each, District of Columbia and Worcester two each, Pittsburg and Lynn one each. From *small-pox*, Baltimore 25, Philadelphia and Chicago three each, Pittsburg and North Adams one each. From *malarial fevers*, Brooklyn eight, New York six, Philadelphia, District of Columbia, and Charleston two each, Baltimore, Cincinnati, New Haven, and Springfield one each. From *whooping-cough*, New York nine, Philadelphia four, Providence and New Haven two each, Brooklyn, Chicago, Baltimore, and Buffalo one each. From *erysipelas*, New York six, Brooklyn two, Philadelphia and Boston one each. From *cerebro-spinal meningitis*, New York two, Boston, District of Columbia, Providence, Lowell, Somerville, Holyoke, and Woburn one each.

From *puerperal fever*, Boston three, Chicago two, New York, Cincinnati, and Cambridge one each. From *measles*, New York four, Chicago one.

One hundred and twenty-seven cases of small-pox were reported in Baltimore, Cincinnati five, Pittsburg four; diphtheria 52, scarlet fever 30, typhoid fever 12, in Boston; scarlet fever 14 and diphtheria 10 in Milwaukee.

In 33 cities and towns of Massachusetts, with a population of 914,068 (population of the State 1,783,086), the total death-rate for the week was 20.31 against 18.81 and 17.48, for the previous two weeks.

For the week ending November 4th, in 172 German cities and towns, with an estimated population of 8,522,712, the death-rate was 22.4. Deaths reported 3668: under five years of age 1787, consumption 481, lung diseases 358, diphtheria and croup 211; scarlet fever 123, whooping-cough 59, typhoid fever 55, measles and rötheln 51, puerperal fever 22, small-pox (Mannheim one) one. The death-rates ranged from 10.4 in Mannheim to 29.9 in Chemnitz; Königsberg 29.4; Breslau 27.2; Munich 25.6; Dresden 22.4; Berlin 23.2; Leipzig 22; Hamburg 19.1; Cologne 24.8; Frankfort a. M. 15.2; Strasburg 20.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending November 18th, the death-rate was 22.6. Deaths reported 3668: acute diseases of the respiratory organs (London) 345, scarlet fever 140, measles 115, fever 82, diarrhœa 69, whooping-cough 65, diphtheria 30, small-pox (London four, Newcastle five) nine. The death-rates ranged from 13.9 in Birkenhead to 30.7 in Sunderland; Leicester 17.8; Brighton 19.5; London 21.1; Sheffield 23.7; Birmingham 23.8; Nottingham 25.9; Liverpool 28; Manchester 29.9. In Edinburgh 21.1; Glasgow 29; Dublin 26.1.

For the week ending November 18th, in the Swiss towns, population 494,390, there were 30 deaths from acute diseases of the respiratory organs, consumption 21, diarrhœal diseases 16, typhoid fever 10, diphtheria and croup nine, scarlet fever three, puerperal fever three, whooping-cough two, measles one, erysipelas one. The death-rates were, at Geneva 10.3; Zurich 18.3; Basle 16.3; Berne 18.4.

The meteorological record for the week ending December 2 in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
November–December, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 26	30.028	28	35	25	48	45	95	63	NW	W	NE	10	11	6	C	O	S	—	—
Mon., 27	29.941	26	31	20	76	77	88	80	NW	NW	NW	11	18	11	O	C	C	—	—
Tues., 28	30.148	28	36	19	70	76	77	74	NW	W	NW	10	4	10	F	O	O	—	—
Wed., 29	29.904	27	32	25	77	90	100	89	NE	NE	NE	16	21	14	S	S	S	—	—
Thurs., 30	29.987	25	30	20	76	67	76	73	NW	W	SW	9	13	8	S	C	C	—	—
Fri., 1	29.969	34	39	18	76	66	62	71	SW	SW	SW	12	13	8	O	C	O|	—	—
Sat., 2	29.877	39	52	32	82	63	96	77	S	S	N	5	8	11	O/	F	O	—	—
Means, the week.	29.979	30						78										15.00	.70

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 1, 1882, TO DECEMBER 8, 1882.

Powell, J. L., assistant surgeon. Relieved from temporary duty as attending surgeon at headquarters, Department of Texas, and to proceed to Fort Davis, Texas, and report to the commanding officer for duty. S. O. 129, Department of Texas, November 23, 1882.

Moore, John, major and surgeon. The extension of leave of absence granted November 3, 1882, is further extended one month. Paragraph 4, S. O. 283, A. G. O., December 6, 1882.

Crampton, Louis W., captain and assistant surgeon. Granted four months' leave of absence. S. O. 280, A. G. O., December 2, 1882.

Caldwell, Daniel G., captain and assistant surgeon. Leave of absence granted in special orders, No. 105, October 3, 1882, Department of the Platte, extended three months. S. O. 279, A. G. O., December 1, 1882.

Gorgas, W. C., assistant surgeon. Relieved from duty at Fort Brown, Texas, and will accompany the Nineteenth Infantry to Forts Clark and Duncan, Texas. Their future stations will be announced. S. O. 130, Department of Texas, November 27, 1882.

Maddox, T. F. C., assistant surgeon. Relieved from duty at Fort Brown, Texas, and will accompany the Nineteenth Infantry to Forts Clark and Duncan, Texas. Their future stations will be announced. S. O. 130, Department of Texas, November 27, 1882.

Reed, Walter, captain and assistant surgeon. Assigned to duty as attending surgeon, headquarters Department of the Platte. Paragraph 2, S. O. 127, Department of the Platte, December 4, 1882.

Taylor, Marcus E., captain and assistant surgeon. The leave of absence granted August 14, 1882, is extended two months. Paragraph 6, S. O. 283, A. G. O., December 6, 1882.

Gray, William W., first lieutenant and assistant surgeon. The leave of absence granted on surgeon's certificate of disability, October 31, 1882, Department of the South, is extended five months on surgeon's certificate of disability. Paragraph 3, S. O. 278, A. G. O., November 29, 1882.

Resignation and Appointment. — Dr. H. P. Walcott has resigned the position of Health Officer of the Massachusetts Board of Health, Lunacy, and Charity, and Dr. Samuel W. Abbott, of Wakefield, has been appointed his successor.

Boston Society for Medical Observation. — A regular meeting of the Society will be held at the Medical Library, on Monday, December 18, 1882, at eight o'clock P. M. Reader, Dr. T. M. Rotch. Subject, A Case of Peritonitis in a Child Eighteen Months Old, following Cheesy Degeneration of the Mesenteric Glands. Dr. W. A. Dunn will report a Case of Emphysema occurring during the Third Stage of Labor.

C. M. Jones, *Secretary*.

Books and Pamphlets Received. — Water-Analysis. A Handbook for Water-Drinkers. By G. L. Austin, M. D. Boston: Lee & Shepard. New York: Charles T. Dillingham. 1883.

Anatomical Technology as applied to the Domestic Cat. An Introduction to Human, Veterinary, and Comparative Anatomy. With Illustrations. By Burt G. Wilder, B. S., M. D., Professor of Physiology, Comparative Anatomy, and Zoölogy in Cornell University, and Simon H. Gage, B. S., Assistant Professor of Physiology and Lecturer on Microscopical Technology in Cornell University. New York and Chicago: A. S. Barnes & Co. 1882.

Lectures.

CLINICAL LECTURE.[1]

BY DAVID W. CHEEVER, M. D.,
Professor of Surgery, Harvard University.

I. PARTIAL ASPHYXIA BY HANGING. INCISED WOUNDS OF TRACHEA AND ŒSOPHAGUS. STRICTURE OF LARYNX. SECONDARY TRACHEOTOMY. FORCIBLE DILATATION OF THE RIMA GLOTTIDIS.

Gentlemen, — The first case is one of extraordinary interest, and one which you will hardly see paralleled. This young man is a Roumanian, and served as a soldier in the Turko-Russian war. Roumania was, I believe, occupied alternately by the opposing armies, and was the scene of some of the worst excesses of the Turks. This man was captured by them and strung up to a tree. Before he was dead, however, he was cut down for some reason. He was then hacked, as he says, with scythes, of which you see the wounds upon his neck and face. By these weapons his trachea was cut open transversely, and his œsophagus, he says, was pierced. At any rate he lay for many months in a hospital of his country, during which time he was nourished by enemata. This mutilation was received five years ago. He gradually healed his wounds, and for a time breathed through the opening made by the *transverse* tracheotomy performed by his assailants. But gradually the chink narrowed, exudative inflammation of the larynx and trachea came on, and three years later (two years ago) he went to the Vienna General Hospital for relief of his breathing. There he came under the charge of Professor Schrötter, who has written a paper about him. Of course the immediate treatment for the spasms of asphyxia was tracheotomy. A tube was inserted, which he is wearing to-day. He carries with him a number of hard rubber tubes which he shifts with great facility. The next attempt of the surgeon was to restore the passage through the constricted larynx. The patient says that at first nothing could be passed through the glottis larger than (as he expresses it) this silk ligature. When the dilating process was begun of course he had no power of speech or of breathing through the larynx. Schrötter carried on the dilatation by means of bougies of constantly increasing size. The bougies are of lead, in form like the sinkers used on fishing lines. The patient was kept under treatment for two years; he was then given a set of the instruments, and after being taught how to use them upon himself was allowed to go. He has come to this country, where he earns his living partly by exhibiting himself as a surgical curiosity. By means of an ingenious apparatus he is able to put the sinkers in place and withdraw them at will, as you will see in a moment. What is especially striking is that the larynx, which in health is so exceedingly sensitive that it cannot tolerate a hair or a particle of mucus without a distressing cough, becomes after such a cicatrization and chronic thickening so tolerant that it will support the presence of one of these heavy sinkers all night. By day the patient breathes through the tube without having anything in his larynx, and by closing the tube with his finger he is able to talk very well. Every night he introduces a sinker, fastens it in place, and sleeps without discomfort. For half an hour after removing it in the morning he cannot speak aloud. For this reason he dislikes to have it in for any length of time during the day, as it interferes with his speech for a while. All this manipulation he does with great dexterity himself, seeming to have no special sensibility of the mucous membrane. He has thus made a great gain in the restored function of his vocal cords. The question occurs, what will be the future of the case? In view of the remarkable success which has followed the treatment of the eminent surgeon, it may seem that an unfavorable prediction is not warranted, but I must doubt whether he will ever be able to dispense permanently with his tracheal tube. All organic strictures are constantly shrinking, and it is not likely that the present size of the glottis will be permanently insured by the foregoing dilatation. There is risk if he leaves out the trachea-tube and lets the orifice close that while he will do well for a time stenosis of the larynx may again supervene, and the opening will have to be again made. And we must remember that when his tracheal wound is closed he cannot tolerate the dilating sinkers in the larynx.

You will now have an opportunity of seeing him manipulate his instruments. As he takes out the tube you can look upward and see the vocal cords and down the trachea into the bronchi. He now takes the repositor and crowds the sinker down between the vocal cords, so that you see the end appearing at the tracheal opening. It fits in a fenestra at the upper side of the rubber tube, and is grasped and fixed by this small pair of forceps, which he introduces through the tube and then screws together like a clamp. The sinker is oblong in section, and its long diameter runs antero-posteriorly. He now withdraws the repositor over the string which is attached to the sinker, and ties the string around his ear. This is the way he keeps the sinker in place during the night, and in the morning he has only to unscrew the clamp-forceps below and pull the string with the sinker attached out at his mouth. When the sinker is in position he breathes easily through the tube, and, as you see, has no difficulty in swallowing either liquids or solids. He says that to-day the larynx and pharynx are both a little swollen, owing to his having caught cold, so that they are slightly irritable, which they usually are not. For this reason also his voice is a little husky, but even now, immediately after the passage of the sinker, you observe that he speaks quite distinctly and audibly.

I call your attention to the tube he wears habitually as being considerably shorter than the silver ones we have for use in this hospital.

The case is rare, both from the unexampled nature of his wounds and for the great surgical skill with which he has been treated.

II. COLD ABSCESS FROM PROBABLE CARIES OF THE PELVIS.

The next patient I bring before you this morning will be operated upon without ether.

He is a healthy young man of twenty-six years of age, who works for a grocer in a suburban town. He has always been active and strong, and has performed without difficulty the duties of his occupation, jumping on and off his wagon, and lifting weights sometimes as heavy as a barrel of flour. What is especially remarkable about the case is that although he presents marked evidences of disease, he has retained his flesh, strength, and color, and looks, in fact, the picture of health. He has actually left his work to-day to present himself for treatment for what is likely to prove a long and exhausting illness. Six months ago he first consulted a physician for wandering pains about his loins, hip, and back. They were considered to be rheumatic, and were treated with blisters, etc., but without effect. Next there began to be noticed a swelling of the left hip and thigh, and the question of hip disease was, of course, raised. The swelling continued, and was accompanied by signs of venous obstruction, which suggested to an eminent practitioner of a neighboring city the likelihood of malignant disease, probably sarcoma, of the thigh. Later the detection of fluctuation rendered the existence of sarcoma less probable. He now carries about with him a swelling and weight which is destined soon to tell upon his health. You will see when he is brought in that the swelling is now most marked in two localities: the first nearly over the trochanter major, the second in the site of psoas abscess. The former gives the more distinct fluctuation. The history and the signs therefore point to a cold abscess, located somewhere about the pelvis.

---

[1] Specially reported for the Journal.

The first question is as to its origin. The swelling, though so marked externally, evidently proceeds from within the pelvis. We discover a rounded prominence inside the internal iliacus muscle. In the absence, as I shall show you, of any indication of disease of the kidney, the spine, or the hip-joint, I conclude that the abscess proceeds from a caries within the pelvis (either of the ilium or ischium), and that the pus has found its way out at the sciatic notch, and probably also along the sheath of the psoas and iliacus muscles. I shall aspirate and draw off as much of the pus as possible, then apply a firm spica bandage, and see if that will prevent its refilling. If, however, the diagnosis of caries is correct, the cause not being removed, pus will again be formed, and the abscess will fill up. It will eventually break, sinuses will appear, and the patient will go through the stages of wasting caries. The prognosis, then, in spite of the man's present healthful appearance, is quite unfavorable.

We will now have the patient brought in. You will notice that he is unable fully to extend his left leg, but keeps the knee and thigh a little flexed. This is a characteristic of psoas abscess, and is an involuntary attempt to relax the fascia, which lies above the pus. The increased size of the limb is obvious. This swelling in the neighborhood of the trochanter major gives marked fluctuation. The swelling on the inner and front aspect of the thigh is harder and firmer, owing to the pus being under the fascia lata. The venous congestion to which I referred is evident on the outer side of the limb. I will now demonstrate to you that the trouble does not proceed from the kidney, spine, or hip. First notice the hollowness of the flank. Grasping his loin at this point, midway between the crest of the ilium and the last rib, I can nearly make my fingers and thumb meet without causing him any pain. This is the region for perinephritic abscess, and you can see that in this case it is empty. Secondly, on running my hand along the spine I find there is no tenderness or projection at any point, hence we have no evidence of Pott's disease. Finally, I ask him to flex his thigh, which he does without difficulty; I rotate it, and the motion is absolutely free and painless. There is, then, no hip disease.

I now enter this small needle over the trochanter, and, as you see, the indicator at once shows the presence of pus. I can feel that the needle is in a great cavity, but the pus does not flow into the receiver, because it is too thick. I use a larger needle, and the pus flows freely for a minute, and then the eye of the needle becomes plugged. The obstruction being removed the pus flows again for a few seconds. After several attempts we have succeeded in getting only six or seven ounces of pus, which is thick, homogeneous, and healthy looking. Fluctuation can be obtained through the whole thigh, from side to side, and though we have nearly emptied the outer swelling, we have probably not withdrawn a quarter of what is in the leg. It would be easy to evacuate the rest with a trocar or a free incision, but this would give rise to an immediate inflammation in the sac. I shall therefore do no more to-day, but cover the puncture with a bit of plaster, have him bandaged, and put to bed.

III. REAMPUTATION OF THE LEG: FOURTH SIMILAR OPERATION ON THE SAME PATIENT.

This man met with a railway injury two or three years ago, for which both legs were amputated in Worcester. Last March I reamputated the left leg on account of conical and irritable stump. At that time he urged that the other, which had also broken out, might be reamputated. I consented to do it in case I should find any necrosis. Only a painful ulcer of the soft tissues was found, and I declined to take the risk of a double operation. He has now come back with the right leg still ulcerated, and wants it again taken off. For the past six months the patient has earned his living by working for a manufacturer of artificial limbs, and he can give you any information you wish as to places of election in amputating, and as to what is necessary in a good stump. The first operations left the two legs of equal length, but the resection of the left one leaves only three and one half inches below the tubercle of the tibia. We are told that four inches is a desirable length for a good stump. He wants the right one left a little longer than the other, and I think we can spare him just four inches. Certainly I can promise him no more. I shall save every possible fraction of the skin and bevel the bone. The stump, from my operation in March, as you see, is good. He even says he can bear a considerable weight on the very end of it, which, of course, is not allowed in a well adjusted artificial limb. The ulcers which he presents on the right leg are due to lateral pressure of the artificial socket pulling the skin back over the end of the bone, and not to direct pressure on the end of the stump.

[The leg was amputated four inches below the tubercle of the tibia, and ample oval skin flaps made. The vessels were tied with catgut and cut short. A rubber drainage tube was put in, and the stump done up in carbolic oil and Lister gauze.]

IV. LACERATED WOUNDS OF BOTH HANDS, AND LOSS OF FINGERS BY A CIRCULAR SAW ACCIDENT.

The stumps of these fingers were trimmed, and one joint resected, a week since, in this hospital. The hands have suppurated extensively, and require incision. I open one abscess on the dorsum, and one in the palm. Long setons are passed through both for drainage. Most of our circular-saw accidents have done admirably this winter. I fear this case will prove an exception to this success.

Thorough drainage, irrigation twice daily with antiseptics, splints to insure rest, and a Lister dressing comprise our treatment in these cases.

Original Articles.

PUERPERAL ALBUMINURIA.[1]

BY FRANCIS F. BROWN, M. D.

JUNE 12, 1881. Mrs. H., of nervous temperament, and subject to neuralgic headaches, but who has otherwise always enjoyed good health, twelve days before the expected time of her first confinement, became suddenly almost entirely blind. Her urine was found to be loaded with albumen, becoming almost solid on boiling, and the quantity was less than normal. There was œdema, but not a great amount. She did not feel sick at first, and was unwilling to see a physician. On the 18th she had severe pain in her head back of the eyes, and for a short time delirium, — which is not an uncommon thing for her when sick, — but generally she continued comfortable till the night of the 22d and on the 23d, when she suffered excruciatingly from headache and pain behind the eyes, and vomited. Urine less scanty, three pints in twenty-four hours, and somewhat less albuminous than when first examined. She had been taking bitartrate of potash and digitalis. Labor commenced on the evening of the 23d, and progressed normally to its termination in seven hours and a half. There was no convulsion. She was kept moderately under the influence of ether, inhaling ten or twelve ounces. Pain entirely left her head and eyes when her labor pains came on, but returned again not long after the birth of the child, and her sufferings from this source for a fortnight were so great as to require twice daily one fourth of a grain of morphia subcutaneously. A severe attack of purulent cystitis came on two days after delivery to increase her sufferings, sometimes causing more than the head trouble. After two weeks she began to mend more decidedly, and was able to get along without opiates.

Her recovery was slow. The cystitis was severe, the pain of it great, and the amount of pus in the urine larger for a fortnight, after which time it rapidly diminished, and in a few weeks more entirely disappeared. The albumen, instead of soon disappearing, as was hoped, persisted in gradually diminishing amount for months. In October it amounted to about one fifteenth of the bulk of the urine. In March and April, 1882, it was tested twice, and none found. In August and September, 1882, it was tested four times, and one specimen contained a small amount, and one merely a trace. At this latter time she was convalescing from an attack of inflammatory rheumatism. No renal casts have ever been found, though careful search has been made by my friend, Dr. S. W. Abbott, of Wakefield, six times at intervals during the year. Frequent and severe headaches, and short and sharp neuralgic pains in her head and face, persisted for months, gradually diminishing. At present I do not think she suffers in this way much, if any more than previous to her sickness. Five months after confinement she called herself well, with the exception of her vision. This returned only in part, and slowly; for a long time she saw things as through a fog, or as if sunblinded. It was variable also; when her head felt bad she could scarcely see her own hands, when it felt best she could see to sew and thread her needle. Up to the present time, September, 1882, it has continued to improve, so that she reads and sews as before her sickness, except when she has neuralgia; then her sight is dimmed somewhat. The left eye is poorer than the right.

The result of this case has been both a satisfaction and a disappointment. Her safe delivery without the occurrence of convulsions was a happy relief, but her tedious convalescence and imperfect recovery, instead of a rapid disappearance of the albumen and recovery of her vision, as is usual in such cases, was not all that was hoped for. Her blindness was at first undoubtedly uræmic; what the condition of the retina is is undetermined, for I have never been able to persuade her to have an ophthalmoscopic examination. Bartels says we must distinguish between the sudden and complete blindness of uræmia, which, as a rule, subsides as suddenly as it comes, and those disturbances of vision due to structural alteration of the retina, sometimes the result of chronic Bright's disease. The physical cause of the former is unknown; it may be œdema of the retina.

Puerperal albuminuria is one of the most frequent of the puerperal diseases. Dr. William L. Richardson examined one hundred and fifty-six successive pregnant women admitted to the Boston Lying-in Hospital, and found albumen in varying amount in sixty-four, about forty-one per cent. Others have found it in from twenty to thirty per cent. of the cases examined. It rarely occurs before the sixth month, and more often in primiparæ.

To repeat, from one to two fifths of all pregnant women have albuminuria in the latter part of their pregnancy in greater or less amount. In a large majority it is never discovered because not looked for, giving rise to no noticeable symptoms, and having no unfavorable influence on the mother or child. And yet from this class come some of the most formidable cases with which we have to deal, for puerpural convulsions occur almost exclusively in the subjects of puerperal albuminuria. How may we know which of them are likely to result seriously? They may be divided into three classes: —

The first in order of gravity includes those pregnant women who are already the subjects of chronic Bright's disease.

The second, cases of acute parenchymatous nephritis.

The third, a much larger number than both the preceding, those subjects of albuminuria who, except the albumen, show no evidence of either of the preceding diseases.

(1.) I have put first in the order of gravity those cases of pregnant women who are already the subjects of chronic nephritis. I have seen but little written about this class, as a class, so that what I have to say on this point are inferences of mine from the general behavior of the disease, rather than from my limited experience or from the direct statements of those who are considered authorities. It seems to me that this disease in a pregnant woman must be likely to give rise to very serious if not fatal complications. We know that premature delivery is liable to occur in such cases. If the mother goes to her full term, what is her liability to uræmic convulsions compared with sufferers from acute nephritis, I do not recollect to have seen stated, but I think it is greater. If she has convulsions, my impression is that they are more apt to prove fatal than in cases of acute nephritis. Should she survive them, she has received an impulse which must accelerate her progress downward, and in some one of her successive pregnancies, if she does not die in convulsions she will be likely to of puerperal anæmia soon afterwards.

---

[1] Read before the East Middlesex District Medical Society.

(2.) Cases of acute parenchymatous nephritis. How frequently this occurs is uncertain. Of one thing we may be sure, if we consider that we have this disease to deal with every time we find albumen in the urine of a pregnant woman, we commit a blunder of the first magnitude. For, as we have seen, from one to two fifths of all pregnant women are found to have albuminuria in the latter part of their terms. Bartels estimates that acute nephritis occurs in about one case out of one hundred and thirty-six of pregnancy. That is to say, from twenty-five to fifty cases of puerperal albuminuria occur to one of acute nephritis of pregnancy. Of course these figures are only very rough approximations, but they show the infrequency of the latter compared with the former.

Acute parenchymatous nephritis of pregnancy runs a similar course to that from other causes, with some important modifications. It is usually developed without any striking disturbance of the general health. Œdema is often absent. Uræmic symptoms are more common than in ordinary nephritis. It may occur in healthy women; Bartels has observed it with special frequency in the robust and plethoric. The amount of albumen is larger than in ordinary acute nephritis. The elements found in the sediment are those found in nephritis from other causes, but hyaline casts are usually not abundant, and blood is rarely found.

The pathological changes found in this disorder are identical with those of other forms of acute nephritis, with the exception that hæmorrhagic extravasation is less frequent.

Prognosis. It is said that one fourth of the cases under consideration have convulsions, and one third of those who have convulsions die. It is claimed, however, that the use of anæsthetics and a better understanding of the disease has of late years lessened its fatality. In those who escape this complication the prognosis is rather more favorable than in nephritis of other origin. Recovery after parturition is usually quick and complete. In either the ordinary or puerperal nephritis the transition from the acute to chronic disease is exceptional.

The most pressing and immediate danger, and the one most likely to be met, is that of convulsions. The more infrequent and remote and insidious one is the transition from the acute into chronic Bright's disease. The latter course is comparatively rare, but it occurs, especially if pregnancies occur in close succession.

(3.) The third class need detain us but briefly. "It is probable that in nineteen cases out of twenty of puerperal albuminuria," Dr. Fordyce Barker says, "the structural lesions of the kidney implied in the term Bright's disease do not exist." It is an interesting fact, for it seems to be one, that so large a fraction of pregnant women have more or less albuminuria in the latter period of their pregnancy. This condition in a majority of cases gives rise to no symptoms, and consequently is suspected neither by the patient nor her physician. There is one point which I do not recollect to have seen distinctly stated, namely, the *quantity* of albumen usually found in this class of cases; it is, I think, not large.

What are the signs by which we may be forewarned of an explosion of convulsions? Dropsy, albuminuria, granular and hyaline casts, and blood corpuscles, and uræmic symptoms may all be present in a marked degree even, and no convulsions occur; and, on the other hand, all these may be found to a less degree in cases which are severe and even fatal. Dr. William L. Richardson and others suggest that the quantity of urine excreted is a guide as to the probable danger, and Bartels makes the same statement in regard to ordinary acute nephritis. The more scanty it is the greater the liability to convulsions, and *vice versâ.* The indication is obvious. Professor Thomas says he rarely sees a case of convulsions where the patient has been under preventive treatment.

When we meet a case of puerperal albuminuria one of the questions that comes up is as to the previous existence of chronic Bright's disease. It seems to me that it is not always easy to determine this at once. It is not an uncommon experience to meet advanced cases unsuspected by the patient, and overlooked, perhaps, by the physician. Robin, as quoted in Barker's Puerperal Diseases, and Neubauer and Vogel make statements in regard to the reactions of albumen in the presence of oxide of copper, which convey the impression that a differential diagnosis may be made by chemical tests between the albuminuria of chronic nephritis and temporary albuminuria of pregnancy. But Prof. Edward S. Wood writes me that he knows of no way of distinguishing between the albumen in the two classes of cases.

In every case in which we find albumen in the urine of a woman, it is well not to overlook the possibility of pregnancy. I was once called to a young unmarried lady in convulsions. The urine was loaded with albumen, becoming nearly solid on boiling. She had been in rather feeble health ever since she had scarlet fever, when a child. There had been some slight puffiness of the face and swelling of the feet. My diagnosis was Bright's disease, prognosis unfavorable. Later, after I had expressed my opinion, passing my hand over her abdomen, I found a *tumor* there. This was in the evening. In the night my bell was rung furiously, and her father shouted, "Doctor, come quick, —— has got a baby." I went, and found a dead child of about six months, born during the unconsciousness of a convulsion. The girl recovered, the albumen diminished and disappeared in a few weeks, and for about a year she appeared in better health than usual. Fifteen months afterwards she went through a similar experience, minus the pregnancy, and died. Her urine was not examined after the disappearance of the albumen till the recurrence of her fatal sickness. I think now that this girl had chronic Bright's disease previous to her pregnancy. I thought so when I first saw her in convulsions before I found out that she was pregnant, but after she recovered, considering the improvement in her health, the disappearance of the albumen, and vagueness of indications of the disease in her history, I hoped I had been mistaken. Renal casts were found in this case, I think, but when and of what character I cannot say.

I recall in my practice but one other marked case of puerperal amaurosis. Was called in December, 1879, to Mrs. E., age about thirty-five, mother of five children, seven months pregnant. Had no difficulty in her former labors. Found her on the bed, with her ordinary clothing unremoved, blanched as if with loss of blood, cold, collapsed, pulse 130, and scarcely to be felt. Pupils were widely dilated; she was delirious, and totally blind. For two or three weeks she had had increasing dimness of vision, which she compared to a mist before objects. A week before she had had symptoms of labor, slight hæmorrhage, and pain, which subsided with rest. With it she had had excruciating headache, which continued two days. During the week past she had been comfortable, and about the house, but her eyesight was so bad she had difficulty in seeing to cut her children's food. While alone with her little children she was taken, about five P. M., with hæmorrhage, and lost consciousness, which she did not recover till after my arrival, two hours later. I gathered that she had some sort of convulsive attack, but no severe convulsion. How much external hæmorrhage there had been, I could not ascertain. She rallied, regained consciousness, but not at that time her eyesight. There was no more external hæmorrhage. Drew by catheter two ounces of urine, all that had been secreted in six hours; found it albuminous to one third of its bulk. No convulsion occurred. Labor went on normally to its termination, about nine hours from the first hæmorrhage. A small amount of ether was used. The cord was flaccid, and the child dead. Immediately following the child, and before the expulsion of the placenta, came a dark clot, saucer-shaped, or as if moulded between the child and the uterus, nearly as large as the child, or weighing, I should think, two or three pounds, which explained her collapse when first found. Her recovery was slow. She was anæmic, her skin had a waxy look, and her face was puffy for some time. Albumen diminished, but did not disappear so long as I kept track of the case, that is, about five months. Her vision improved to some extent, but was so poor that five months after confinement I persuaded her to consult Dr. Derby, who found atrophy of the optic disks, vision in one eye one third, in the other one twenty-fifth. Prognosis as to recovery of vision unfavorable. Subcutaneous injections of one fortieth grain strychnia were advised and tonic treatment. Patient did not follow the advice at all, and has left town. I have seen her once since, unprofessionally, during the summer of 1881, and could make only general inquiries. She said she was pretty well, and her vision was improved somewhat. I am sorry to say that no microscopical examination of the urine was made.

Whether this case is one in which nephritis tends to pass from the acute into the chronic form, or whether, as I suspect, there was some disease of the kidneys previous to her last pregnancy, there are not sufficient data to determine.

◆

FOUR CASES OF "PHLEGMASIA ALBA DOLENS."[1]

BY HAROLD WILLIAMS, M. D.

I PRESENT to the notice of the Society to-night four cases of so-called phlegmasia alba dolens which have occurred in my practice, not so much because I consider these cases of especial interest in themselves, as because, taken in connection with each other, they seem to suggest a common cause, upon which I believe too little stress has hitherto been laid.

Case I. Mrs. A. was confined six days previous to my first visit, after a normal labor. She had been doing well until the night before, when she had a chill, followed by pain in the left groin.

During the following week the signs characteristic of phlegmasia dolens appeared, the thigh and leg becoming enormously swollen, being white and shiny in appearance, and hard, tense, painful, and unyielding on pressure. The pain was most severe on pressure over the popliteal and femoral vessels, which were enlarged and hardened. This case was a typical one, and followed the usual course, the patient recovering in about six weeks.

Case II. Mr. B., forty years of age. The patient had been suffering from a well-marked case of typhoid fever for two weeks previous to my first visit. He had been treated with cathartics, diaphoretics, and a low diet, and was very much reduced when I first saw him. It was an unusually severe case of typhoid fever, with low delirium and hypostatic pneumonia, but the patient did well on a milk diet with brandy, until the fifth week of his illness, when, after an increase of temperature, a small swelling was detected in the right groin, which increased in size, and on the second day after it was first noticed fluctuation was detected and an incision advised; but to this procedure the relatives would not consent. Two days later the thigh and leg began to enlarge, and although the bubo was spontaneously evacuated, the swelling still persisted. The popliteal veins could be distinctly felt, hardened and enlarged, and could be rolled to and fro under the fingers, and this state of things could be traced upward in the thigh through Scarpa's triangle. The whole limb now became enormously enlarged, was tense and unyielding, and presented the characteristic appearance of phlegmasia alba dolens. The limb continued in this state for two weeks, when it was noticed that the calf of the leg had become œdematous. On the following day there was a second rise in temperature, and deep fluctuation was felt in the calf. Free incisions, with the insertion of drainage tubes, were again advised, but to this the relatives would not consent, and the patient gradually became weaker, and subsequently died of pyæmia.

There was no autopsy.

Case III. Mr. C., a lawyer, sixty-three years of age. Patient has always been well with the exception of occasional pains, supposed to be rheumatic. One week previous to present attack he had pain of this character in the left shoulder. On my first visit, March 16th, he complained of intense pain in the right ankle-joint. The night before he had had a rigor, and had not been feeling well for some time, being in a much overworked condition. Pulse 48. Temperature 100° F. Ankle-joint slightly swollen, red, hot, and painful. No history of injury. These signs in the ankle-joint gradually subsided, but on March 20th patient complained of intense pain in the calf of the leg. Both foot and leg were slightly enlarged, but neither hot nor red. Pain most severe in popliteal space, where the veins could be felt hardened and enlarged. No change in vessels of the thigh.

March 22d. Thigh began to swell, and there was intense pain on pressure in Scarpa's triangle, where the vessels could now be felt hardened and enlarged.

---

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, November 8, 1882.

Dr. Porter saw this case with me in consultation, and there seemed to be no doubt that there were thrombi in the veins.

The pain diminished as the swelling increased, and the limb remained in this state until April 3d, about three weeks after the beginning of the attack, when precisely the same sequence of events occurred in the left leg. Patient made a good recovery, and was able to move about six weeks after the beginning of the attack in the second leg.

In this context I would say that phlegmasia dolens seems to be idiopathic in this gentleman's family, and his son has had seven different attacks of this disease.

Case IV. Mr. D., a dispensary patient in an advanced stage of phthisis. Two weeks before death he had phlegmasia dolens in both lower extremities, beginning in the thighs and extending downwards, until the whole of both limbs were involved.

In this case the pain was never excessive. No autopsy was permitted.

The treatment in each of the cases was expectant. Morphia was given subcutaneously in sufficient quantity to control the pain. The most liberal diet possible was insisted upon, consisting of eggs, milk, meat, and broths, and large quantities of brandy were prescribed, one of the patients taking as much as a quart in the twenty-four hours.

The local treatment in three of the cases consisted in the application of thin flax-seed poultices, with laudanum, and they were made large enough to envelop the whole limb, their application being continued as long as the pain was severe.

In Case I. cold applications afforded greater relief. When the pain had subsided the limbs were swathed in cotton batting and bandaged to the groin with flannel bandages.

In the two cases which recovered elastic stockings were ordered before the patients were allowed to leave their beds.

Now in each of these four cases we have a group of clinical phenomena, described under the head of phlegmasia alba dolens, and the first question which suggests itself to us is, What is the pathological process which gives rise to these phenomena?

On this subject we find an immense difference of opinion, but without going into the various views I will merely say that the most important theories may be included under three classes: —

First, that phlegmasia alba dolens is due to venous thrombosis.

Second, that it is due to inflammation and thrombosis of the lymphatics.

Third, that it is due to a combined inflammation and occlusion of both veins and lymphatics.

Under these three heads we may include the views of most modern writers on this subject, although we may find that other structures besides the veins and lymphatics are involved in the process, as, for example, those cases occurring in midwifery patients, in which there is an inflammation of the skin, the subcutaneous and the intermuscular cellular tissue, which seems to be an extension of the inflammation of the cellular tissue about the uterus. But that this inflammation of the cellular tissue should occur without an inflammation of the walls of the veins and lymph vessels does not seem probable, and I know of no writer who asserts positively that such is the case.

In this context I would mention, in passing, the septic theory of phlegmasia dolens, as there seems to be no doubt that phlegmasia is often a septic process. I merely mention this because it is more properly a cause of the pathological state, while the question before us now is in regard to exactly what the pathological process may be.

To return to our three classes, it seems to me that the first may be positively excluded, since venous thrombosis alone is not in itself a sufficient cause for the phenomena of the disease, as we have in many instances thrombi occurring in the veins of the lower extremities unaccompanied by characteristic phenomena of this disease.

In regard to the second class, I do not believe that a simple inflammation and occlusion of the lymph vessels is in itself a sufficient cause for the phenomena in question. But this is a matter of opinion as yet, and I am aware of no investigations which can settle this point definitely.

It is under the third class that I group my cases, since venous thrombosis was present in all. Whether the venous disease preceded that in the lymph vessels it is impossible to say with any degree of certainty, but I am inclined to the belief that in each case the venous disease preceded the inflammation of the lymphatics, since the hardened and thickened wall of the veins could be distinctly felt before the shiny, white appearance of the limb was manifest. And not only do I believe that the venous thrombosis was the initial phenomena in these cases, but also does it seem to me possible that the venous thrombosis, combined with the hardened and enlarged condition of the walls of the veins, may have been in itself a mechanical cause for the thrombosis and consequent inflammation of the lymph vessels by exerting pressure upon them.

But be that as it may, venous thrombosis was present in every one of my four cases, and the next question which naturally arises is in regard to those conditions which favor such thrombosis.

Apart from a stagnation of the blood and the changes in the walls of the vessels, we have authority for saying that thrombosis in the vessels is rendered more likely by an altered condition of the blood itself, and this alteration in the blood seemed to be the only condition common in my four cases, all of which occurred under very different circumstances.

In Case I. we have the anæmic condition of the blood, which is always present in pregnancy, when the blood is more watery, when its serum contains less albumen, but more fibrine and extractive matters.

In Cases II. and IV. both patients were extremely anæmic, as one would expect in a case of typhoid fever treated antiphlogistically and in a patient in an advanced stage of phthisis.

In Case III. the patient was much less anæmic than the others, but still he was in a very much overworked condition, and I am told that the seven attacks his son has had all came on after overwork.

Of course it is impossible to say that there was no alteration in the walls of the veins, as a cause for the thrombosis, but still there was no reason for assuming that such was the case. Then, again, in all the cases except the typhoid fever case, the heart's action was vigorous. It is by no means a new idea that an altered condition of the blood is a condition favorable to the formation of thrombi in the veins, but I emphasize the subject because it seems to me that hitherto far too little stress has been laid upon it, and because I regard a consideration of this condition of the blood a most important factor in the treatment of phlegmasia dolens, and I venture to recommend to you the importance of advising a general tonic treatment, the most nourishing diet, and the free exhibition of stimulants in cases like the above.

◆

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

HÆMORRHAGE AND HÆMORRHAGIC INFLAMMATION OF THE LABYRINTH OF THE EAR.[1]

WITH our present knowledge a hæmorrhage into the nervous structures of the labyrinth must be assumed in a certain number of cases in which a sudden and total deafness occurs in a previously healthy ear. Cases where this occurs from injury, especially from fractures and fissures of the petrous bone, are not uncommon, and have been frequently proven anatomically. Moos has reported the dissection of a case of total deafness resulting from a gun-shot injury to the external ear without injury to the deeper parts where an effusion of blood in the membranous labyrinth was the cause of the deafness, without a loss of the labyrinthine fluid which would in itself have accounted, if it had existed, for the deafness.

Idiopathic hæmorrhages in the labyrinth without any preceding injury are, however, very rare. The famous case by Menière,[2] which furnished the foundation for the so-called Menière's disease, is almost if not the only one on record. This case, incomplete as it is, for the dissection was by no means thorough, leaves scarcely a doubt that the total deafness was due to labyrinthine hæmorrhage, although the term "lymphe plastique rougeâtre" points to a simultaneous inflammatory process in the membranes of the labyrinth. Notwithstanding the mass of literature which has appeared on Menière's disease this single and imperfect dissection remains as the only anatomical proof of the pathology.

In this connection another form of disease deserves attention, as it is doubtful whether it is Menière's disease, a disease of the brain, or an extension of an inflammatory process from the brain to the labyrinth. It occurs not infrequently in children, is associated with a staggering gait, and is preceded or accompanied by a sharp fever and other symptoms closely resembling cerebro-spinal meningitis. In common with Menière's disease it shows deafness, subjective noises, and staggering gait; it is febrile, while the latter is not, but rather apoplectic in its symptoms; it occurs chiefly in children, and is almost without exception bilateral, consequently producing deaf-mutism, while Menière's disease occurs generally in adults and is generally unilateral. Of this disease Lucæ has seen one hundred and nineteen cases in the last eleven years, and one hundred and one of these were considered due to meningitis or cerebro-spinal meningitis, as such was the diagnosis of the attending physicians at the time of the acute symptoms. Of these cases eighty-five were children totally deaf, eight were adults totally deaf, while seven retained a slight degree of hearing. In one the total deafness was only unilateral, in all of the others it was bilateral. The remaining eighteen of the one hundred and nineteen were considered to be cases of Menière's disease, as they certainly showed the complex symptoms characteristic of that disease. Of these eighteen one was in a child and bilateral, and seventeen were in adults, of which thirteen were unilateral and four bilateral affections.

As yet no dissections of the ears of children affected during cerebro-spinal meningitis have been published, although three dissections of such cases in adults[3] showed a bilateral purulent inflammation of the labyrinths which had extended centrifugally from the brain to those cavities. A fortunate combination of circumstances has, however, now enabled Lucæ to observe a case both clinically and anatomically. A child aged three and a half years, healthy and of good hearing and speech, showed symptoms of a light cerebro-spinal meningitis; in ten days the threatening symptoms had so far passed away that he was able to sit up and play. On the eighth day he complained of a sharp ringing in the ears, which continued till the eleventh day, when he suddenly became totally deaf in both ears. Inspection of the ears showed only slight injection of the manubrium on the left side, nothing abnormal on the right. A diagnosis of otitis interna acutissima due to extension of inflammation from the meninges to the labyrinth was made. A few days after the examination he was again taken down with vomiting, fever, opisthotonos, strabismus, and all the undoubted symptoms of meningitis, from which he died fifty-seven days after the beginning of the illness, the deafness remaining total from the time of its first appearance. The autopsy showed, in brief, a meningitis tuberculosa in various stages. Both petrous bones showed before dissection marked redness in the neighborhood of the semicircular canals; the nervi acustici were normal, both macro- and microscopically. The osseous semicircular canals, especially the upper and posterior ones, were filled with fresh clots and fluid blood; both vestibules exhibited the same appearances in a lesser degree. The microscope showed lymph or pus cells with the blood. A small amount of free blood was found in the cochleæ. The membranous canals and the vestibular sacs were of a yellowish-red color and imbedded in the clotted blood. Corti's membrane was enormously thickened and the lamina spiralis intensely congested. The external and middle ears were normal, and the conducting mechanism freely movable.

It is unnecessary here to give a full account of the microscopical appearances; they are given in full in Lucæ's article, with illustrations. Suffice it to say that this very thorough and careful microscopic examination showed that the inflammation had extended from the meninges along the fibres of the dura mater and along the blood-vessel accompanying them to the spongiosa of the petrous bone, the particular spot of extension being through the minute foramen which penetrates the upper surface of the petrous bone just beneath the upper semicircular canal. Here an osteomyelitis was set up, and the inflammation then passed to the membranous semicircular canals, setting up a hæmorrhagic inflammation, thence to the vestibule and cochlea. It was impossible to determine whether the hæmorrhage or the inflammation was the primary disease.

Although in this case of Lucæ's the pathological appearances in the labyrinth closely resembled those described by Menière, in his case the symptom of vertigo was never present. Two points of diagnostic interest are worthy of attention, the sharp ringing in the ears which preceded the sudden total deafness for three days, and which probably marked the beginning inflammation in the petrous bones, and the marked congestion along the manubrium of the left side, which was the side on which the hæmorrhage was greatest.

---

[1] Lucæ, Virchow's Archiv, vol. lxxxviii, p. 556.

[2] Archives of Ophthalmology and Otology, 1871.

[3] Heller, Deutsches Archiv f. klin. Med., iii. p. 482. Lucæ, Archiv für Ohrenheilkunde, v., p. 188.

Hospital Practice and Clinical Memoranda.

OBSTETRICAL POLIKLINIC, LEIPZIG.

A CASE OF VARICOSE TUMOR OF VULVA.

BY WALTER P. MANTON, M. D.

The following case, which occurred in the Obstetrical Poliklinic in Leipzig, is interesting because of its comparative rarity.

Frau X., undecimipara, was taken with labor pains early in the morning, January 12, 1882. At nine A. M. the attending midwife, finding an abnormal position of child, sent to the Thieoschs Institute (lying-in) for a physician.

Examination showed a transverse position, first variety, anterior. Heart sounds irregular and rapid; os uteri fully dilated; cord prolapsed. In the posterior half of the right labium major, extending inwards to the labium minor, was a varicose tumor the size of a Florida orange, presenting a spongy feel and appearance.

The rapidity and irregularity of the heart sounds indicated danger for child, and extraction was at once performed.

In bringing down the arms, which were crossed behind the head, the clavicle and humerus of the right side were fractured, and the manipulations caused a rupture of the projecting tumor, but, owing to the pressure on the parts, very little bleeding occurred.

Child was born asphyxiated, but recovered after a few minutes' resort to the usual methods.

As soon as the head escaped from the vulva a copious hæmorrhage from the torn varix took place, saturating the bedding, and forming a pool on the floor beneath. This was soon controlled by pressure on the wounded parts with the fingers, followed in a few minutes by pledgets of cotton soaked in tr. ferri sesquichlor., and the subcutaneous injection of ergotine.

The placenta was expelled by Credé's method about five minutes after birth of child, and caused a momentary renewal of the hæmorrhage. After washing out the vagina with the hot douche, inspection showed the tear to extend from the right of the middle of the perineal tendon obliquely upwards into the varicose tumor, its length being about two centimetres by one half centimetre wide.

At six P. M., eight hours after operation, the patient's pulse was 140, temperature 102° F. By the third day both pulse and temperature had fallen to normal, and the lying-in-bed ran a normal course, the patient going about her usual work on the seventh day, although still weak from loss of blood.

After the first day the perineo-varix tear was dressed with iodoform powder, and healed completely within ten days.

It is interesting to note that the patient's former labors were normal, the tumor occasioning no inconvenience.

As far as could be ascertained the history of the tumor was as follows: —

When a young girl the patient had had a boil or abscess at the point where tumor is now situated, which was opened by a physician. Although tumor existed before marriage no direct connection could be traced between it and the abscess save in point of location. In the non-pregnant state the tumor is one fourth its present size. During menstruation it enlarges and becomes painful. The tumor has also gradually increased in size from year to year. During pregnancy a great increase in size takes place, although in former times it has never equaled its present dimensions.

The only varicose tumor of the vulva, in the non-gravid state, which I find reported in the scanty literature of the subject, was seen by Winckel[1] in his private practice, the case being that of an unmarried lady with a tumor the size of a hen's egg on the left labium major.

Varicose conditions of the veins of the vulva are not infrequently met with in pregnant women, but they seldom reach any important size, are rarely ruptured during delivery,[2] and generally disappear soon after labor.

The danger from hæmorrhage from a ruptured varix is very great, the blood spurting from the vein, says Schroeder,[3] as from a large artery. Hyde[4] saw death result in forty minutes from such a hæmorrhage.

A CASE OF BRONCHOCELE.

BY T. AMORY DEBLOIS, M. D.

Mary D., aged twenty-one years, born of French-Canadian and Irish parents, and residing in a dark and unwholesome tenement in South Margin Street, appeared at the Throat Clinic of the Boston Dispensary on the 19th of last December. She complained of "a lump which had been growing on her throat," as she stated, for the preceding six or seven months.

On examination there appeared a small bronchocele occupying the right lobe of the thyroid gland, and encroaching somewhat on the isthmus. The tumor measured perhaps about 2½ inches in diameter and 1¾ inches in thickness.

Having had good results from the internal use of arsenic in these slight enlargements, I prescribed it in this case, together with the topical application of the tincture of iodine to the affected part. This treatment was continued without apparent result for three weeks.

Having read reports of successful treatment of other forms of tumors by the hypodermic injection of Fowler's solution, I determined to try it in this case.

On the 7th of January, with a hypodermic syringe, I injected seven minims of a mixture of Fowler's solution and water, equal parts, into the substance of the gland.

On the 9th, when the patient reappeared, there was no apparent change. She had not been affected in the least by the injection, and it was repeated.

On the 11th there was neither change nor discomfort, and again seven minims were injected.

---

[1] Pathology of the Female Sexual Organs.

[2] Winckel, Pathology of Child-Bed, states that this occurs in less than three per cent. of such cases.

[3] Obstetrics.

[4] Transactions Obstetrical Society London, 1870–71.

On the 13th the treatment appearing, to say the least, to be well borne, — for the twenty-one minims previously injected seemed to have had no effect, — a fourth injection was made into the tumor.

On the 15th the patient returned to the Dispensary, complaining of great discomfort, and sharp pains in the region of the bronchocele, which, though it showed neither local heat nor redness, yet was hard and tense, and certainly larger than it had been, and was rather sensitive to the touch. The patient's temperature was 102.5° F. Cold applications to the parts were ordered, and medication was suspended.

On the 17th she was again seen. She was markedly anæmic, with slight eruption on forehead; was weak, and complained of nausea; had slight nervous twitchings of the mouth and hands. The pain in the tumor was worse than before. Ordered iron and brandy, which she did not get until the next day, when I saw her at her home. She was then very weak, had had constant vomiting during the day, but by the evening it had ceased. Half an ounce of brandy every two hours was ordered, and pills of the subcarbonate of iron four times a day. At this time the pain in the thyroid gland had nearly subsided, but there was a dark-brown pigmentation of the skin over it.

In four or five days the patient was able to go to the Dispensary. Her menses had appeared two weeks after the last regular menstruation. She was furnished with milk and eggs, and the carbonate of iron was still continued. I did not see her again until about the 5th or 6th of February. She was looking better, and the bronchocele had diminished in size about one half. About the 20th of February there was very little left of the enlargement, though the pigmentation still remained.

I lost sight of the patient until the 1st of April. There was then nothing to be found of the bronchocele, and the parts appeared perfectly normal, with the exception of a very slight discoloration of the skin. She stated that she had been perfectly well for a month.

In considering this case the questions naturally present themselves : —

(1.) Was this a case of arsenical poisoning, and if so, was it caused by the mechanical retention in the gland of the three first injections of the solution, and were they all taken up with the fourth at the last?

(2.) Was the absorption of the bronchocele due to the arsenic, was it the effect of the irritation of the injections, such as would be obtained from the injection of iodine, — or did it subside spontaneously?

(3.) Was the appearance of the menstrual flow dependent in any way on the irritation of the growth, and would this prove any sympathy between the thyroid gland and the ovaries?

— It is worth while to remember that *caulophyllin* in the second trituration is a good thing to give in a case of placenta prævia. This we notice in a homœopathic exchange. The man who discovered its efficacy under such circumstances does not know how much power it has to expel from the uterus "morbid growths," of which he apparently considers the placenta one, but he does know that it has "a decidedly soothing and quieting influence over the disturbed nervous system." Why would n't it be a good plan to give a little of it every hour in case of other hæmorrhages, a wound of the radial artery, for instance?

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

J. B. SWIFT, M. D., SECRETARY PRO TEM.

OCTOBER 28, 1882. Stated meeting. Sixty-three members present.

DR. H. J. BARNES read a paper entitled

THE WATER SUPPLY OF BOSTON.

DR. C. S. MINOT being called upon said that he considered the water supply of Boston a disgrace to the city and a source of danger to the health of the community, and that Boston had been severely criticised for allowing it, not only by her own citizens, but also by outsiders. Professor Leeds, of New Jersey, an expert in the matter, having been asked to make an investigation of the water supply in the towns along the Hudson River, had made one of the most perfect chemical studies of a river (the Passaic) ever made. In connection with his work, for comparison, he had analyzed the water from a considerable number of cities, among them that of Boston, and found that Boston was supplied with the worst of all, and he considered it as absolutely dangerous. He wrote to the *Advertiser*, but no notice had been taken of his communication, and when at last the question was agitated, instead of getting him to do the work, it was put into other hands, with the result with which we were acquainted.

Dr. Minot spoke of the water supply of Leipsic, where much the same blunders had been made as in Boston, but, thanks to Professor Hoffmann, that was now changed. In working up the subject Professor Hoffmann had reached the following conclusions : —

(1.) Water works were not a piece of engineering, except under special conditions, but rather should depend on chemists.

(2.) A city should, when possible, be supplied with soil water, and not by water from ponds or rivers, because these are exposed to surface washings polluted with organic and other matter. Thus there is a variation in the composition, and also being exposed to variations of temperature, the water is uncertain and unreliable in character. Here we have conditions favorable for the development of bacteria, and this fact alone should be sufficient to condemn ponds and rivers.

The advantage in not using ponds is that a constant temperature and composition can be obtained, for if the supply is drawn from the soil, besides getting abundant water, it is well filtered, deodorized, and cooled.

(3.) Another objection to ponds is that using them necessitates constant cleaning of the storage basins, and this is an extremely dangerous thing to do, for by drawing off the water the animals are killed, and when the water is let in again it is filled with dead organic matter, in a condition best suited for putrefaction. Basins should always be cleansed by repeated flushings. In Leipsic a thorough exploration of the country was made, and numerous borings. In this way the natural level of the water was found and the nature of the soil. The borings also determined the direction of the flow. They thus discovered the best point to draw water from. From a single boring made at a spot thus selected they obtained an abundant supply, and having a good composition, since the boring was made where the supply was cool and pure. From the boring the water is to be carried to a basin just sufficient for each daily supply. It is thought that the same method might be employed here, and certainly the subject is of sufficient importance to have attention drawn to it.

Dr. Barnes said that under the present system we were in danger of the stirring up of the basins every year.

Dr. A. N. Blodgett said that he could testify to the filthy condition of the basins, as on two occasions he had been in the neighborhood of Farm Pond when the water had been drawn off, and they had the appearance of flats at low tide filled with decaying vegetable material, like fresh-water swamps, and certainly would lead one to suppose that they contained everything considered injurious to health. The area exposed was quite large, and the water must be distributed daily in the city. Thinks that he has seen ill health produced by the use of the water, some people being quite susceptible to its influence. Spoke of the apathy of the Water Board on the subject, over a year having now passed without any action being taken. Can testify that Dr. Barnes has had to fight against untold difficulties.

Dr. H. I. Bowditch said he could not allow what had been produced and what he had experienced to pass unnoticed. He suffers personally to a great extent, so that he has been obliged to give up the use of the water for drinking and also for bathing without further filtering. He went to the mayor about it, but could get no satisfaction, as he did not consider it his duty to interfere with the commissioner. Suggested that some action should be taken by the Society. Reading papers did no good, but a committee should go before the city government from the Society.

Dr. Weeks suggested a political revulsion, which would turn the present commissioner out of office. Said that in Chelsea they had suffered in the same way from the Mystic water. Committee after committee was sent to the commissioner without avail, until finally the National Board of Health took up the matter, and it was remedied.

Dr. W. H. Baker testified to great discoloration and disagreeable odor of the water. In his house the water from the main pipe was so much discolored as to be unfit for drinking and bathing.

Dr. C. S. Minot said that the taste of water was a matter of no consequence; may be very offensive, but harmless, or may have no taste and still be dangerous.

Dr. Garratt read a paper entitled

STATIC ELECTRICITY AS A REMEDY.

Dr. Morton Prince showed some microscopical preparations of

THE BACTERIUM OF "RED SWEAT,"

stating that the case from which they were obtained was that of a young man who complained simply of the red discoloration caused by the sweat from the axilla, the underclothes being stained by it. Examination showed the characteristic waxy masses encrusting the hairs. The microscope showed these masses to consist of bacteria corresponding to the description which has been given of them.

Adjourned at 9.45.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

November 8, 1882. **Dr. George B. Shattuck** in the chair.

The Secretary read a communication from Dr. Samuel F. Hazelhurst, Secretary of the Pathological Society of Philadelphia, presenting to the Section a copy of the last volume of printed Transactions of that Society.

Dr. Harold Williams read a paper entitled

FOUR CASES OF PHLEGMASIA ALBA DOLENS.[1]

Dr. DeBlois said that in support of the theory of causation of phlegmasia by anæmia, he could adduce a case occurring in New York in the practice of Dr. Isaac Taylor. Porro's operation for extirpation of the uterus had been performed, and for a month afterward a very low diet was prescribed, consisting chiefly of milk, and not much of that. The patient was very much reduced in strength and flesh from this cause, so that the anæmia was very marked. The operation was successful, the process of repair being completed in a perfect manner. At this time the right leg began to swell, and in two days a typical phlegmasia was developed. The leg was enveloped in cotton and covered with oil silk. On the seventh day of the phlegmasia the patient arose from her bed and attempted to stand. She immediately became faint, and expired at once. Death was supposed to have been caused by embolism.

Dr. Harlow inquired how the phlegmasia of phthisis differs from the swelling of the limbs which is so commonly observed in advanced phthisis.

Dr. Williams replied that the enlargement of the lower extremities in phthisis was generally due to œdema, but that the essential lesion in phlegmasia alba dolens consists of a cordlike occlusion of the veins and lymphatics, and the limb is hard, white, tense and shining.

Dr. H. I. Bowditch said that it was somewhat remarkable that phlegmasia is not more frequently observed in anæmia, if this can be considered a cause. We often have cases of extreme anæmia, but very seldom see phlegmasia in those cases. The theory that it is dependent upon impoverishment of the blood seems to assume more than observation warrants. If this be true, why are not the upper extremities the seat of the disease as well as the lower.

Dr. Williams replied that while anæmia may be a condition favoring thrombosis, there are other factors which determine the locality of the thrombus, and cited as an example the fact that phlegmasia occurs most frequently in the left leg for the reason that the left common iliac artery crosses and lies upon the common iliac vein, and thus causes a greater or lesser impediment to the flow of blood in the vessel, and so predisposes to thrombosis of this vein. As a clinical fact, phlegmasia alba dolens does not occur in the upper limbs.

Dr. H. W. Broughton remarked that anæmia is most commonly met with in unmarried girls, and asked why phlegmasia does not more frequently occur in these cases.

Dr. Williams replied that the immediate development of the disease may be induced by a variety of causes, but that anæmia is a preëxisting condition in all cases, and therefore is considered as the predisposing or remote cause.

---

[1] See page 581 of this number of the Journal.

DR. STRONG asked if the thrombosis disappeared before the swelling had subsided.

DR. WILLIAMS replied that in the case of typhoid the whole leg broke down before any attempt at recovery had occurred. In the second case there was probably canalization of the thrombus, and a restoration of the circulation in the same manner as this occurs in phlegmasia during the puerperium.

In reply to the question if puerperal phlegmasia is not due to septicæmia, Dr. Williams stated that there is a difference in origin of this affection at that time. It may arise from septic poisoning, or it may be occasioned by pressure of the heavy uterus upon the iliac veins.

DR. BLODGETT mentioned two cases of this disease, in one of which it occurred after a mild though prolonged attack of typhoid fever, and was the occasion of considerable distress. Here anæmia and weakness may be supposed to have been present, and possibly to have induced the phlebitis. The other case was that of a gentleman of advanced life, in which there was also considerable debility preceding the attack, and symptoms threatening gangrene were observed during the disease. Both these cases, however, recovered without serious consequences.

DR. G. B. SHATTUCK referred to a paper by Dr. Lyman which was read before this Section last year, and published in vol. cv., p. 169, of the JOURNAL, which contained a description of many pathological processes which may follow typhoid fever. The cases of phlegmasia complicating typhoid, which he had observed, had not occurred in patients especially debilitated by the disease. There is no doubt that many different causes may, under certain conditions, contribute to the appearance of this disease, and produce variations in its progress and final results.

A HOUSEHOLD EPIDEMIC FROM BAD DRAINAGE.

The following brief outline of the history of a series of cases gives the substance of a paper read by **DR. H. W. BROUGHTON**, and reserved for subsequent publication.

A family of nine persons lived, in the fall of 1881, in a suite of rooms in a large tenement house in this city. The house is a modern one, of good appearance, and the family respectable, and of neat and orderly habits.

On the 17th of October, 1881, George, aged nine, was seized with a severe febrile attack, resulting in recovery after three days. Three weeks later his sister, Ina, aged twelve, was taken very ill with typhoid fever, of which she died on the fifth day. On the 19th of January, 1882, Mrs. S., aged twenty-nine, was attacked with acute croupous pneumonia, followed by gangrene of the lung and empyema. Dr. A. T. Cabot made a permanent opening, and the patient partially recovered. Whether she will ever fully regain her health is still doubtful. Six weeks later (March 14, 1882), her father, aged seventy, became sick with phlegmonous erysipelas, resulting fatally on third day. In quick succession three other members of the family suffered from attacks of febricula similar to the first case. The only ones exempted from sickness were two men, whose life was largely out-of-doors. After the death from typhoid the Board of Health examined the house and found the drainage very defective. By some misfortune the family did not learn of this defect for several months.

The following points suggest themselves: —

(1.) Can the defective drainage account for this sickness?

(2.) Ought not the family to have been duly notified of the defect?

(3.) Ought not physicians to notify the Board of Health of *all* cases of sickness that clearly indicate defects of drainage?

DR. H. I. BOWDITCH spoke of the many ways in which sewer gases may gain entrance to our dwellings, and said that he considered the set bowls in chambers and sleeping rooms to be dangerous, from the possible escape of sewer gas from the drain pipe and overflow opening into the air of the room. In one sleeping room of his house which communicated directly with the drain he had had the drainpipes cut off and a slop-pail placed under the washbowl, which is emptied as used. He has recently had a completely new system of water-pipes and drains, with carefully adjusted traps, and most thorough ventilation of the soil and waste pipes, but he is still fearful of the escape of noxious gas.

Dr. Bowditch related a story told by Dr. Carpenter on a recent occasion, concerning the outbreak of cholera in Bristol, in which Dr. Budd endeavored to trace the disease to the water supply, it being observed that every case was confined to a district taking water from one service. After much opposition from the overseers of the water system, Dr. Budd finally made an inspection of the source from which the supply was obtained, and which was a natural reservoir of considerable capacity. On making a tour of the margins of this basin he observed a rivulet which trickled down the side of a cliff and emptied into the reservoir. On ascending the cliff a small house was found situated near the rivulet. The occupants were dirty in their habits, and much of the filth of the house was thrown into or near this small stream. On further investigation Dr. Budd learned that the first case of cholera in the neighborhood of Bristol occurred in this house, and that the patient died of the disease. The dejections of this patient were thrown into the stream, and were carried by the water to the reservoir, following which the outbreak of cholera in Bristol took place, and was confined to those streets and houses supplied with water from the infected source.

Dr. Bowditch thought that in many, if not most instances of successive serious disease in one spot, careful examination might reveal some source from which the disease had emanated. He deems it every physician's duty to seek for such sources.

DR. HARLOW said that cases of the consequent type described in the paper often presented themselves to his observation, and he had no doubt that diseases of this nature were much more frequent than was generally supposed. In regard to the character of febricula, he recalled a remark of the late Dr. Jacob Bigelow, when speaking of such a case, "It was half way between typhoid fever and nothing at all."

DR. BARNES asked if the Board of Health did not notify the owner of the building? The Board occupies a very delicate as well as very responsible position in regard to these matters. It cannot enter private property unless absolute cause for so doing exists. It is generally prompt and thorough in its investigations, and its reports are usually found to be correct.

As an instance of the efficiency of the Board, Dr. Barnes mentioned the filling of the Back Bay by the Roxbury Mill Corporation, who were depositing decayed animal matter upon the embankment, to the great offense of the residents. The Board at once compelled them to suspend operations, and the result was a wholesome change in the character of the material provided for the embankment.

Dr. Barnes spoke of a series of cases in his practice in which sore throat was the principal symptom, and which were treated by inhalation of antiseptic vapors. All did well, and quickly recovered. Yesterday, however, another case occurred in the same house, and Dr. Barnes immediately notified the Board of Health.

Dr. Blodgett thought that there might be no connection between the cases of Dr. Broughton. Typhoid was not reproduced in any instance, and no disease of a contagious or infectious character supervened in the family. It is not uncommon to see pneumonia in winter, and short sicknesses like those of three members of this family, which did not exceed three to five days, are constantly occurring without reference to unsanitary surroundings. There seems to be no special reason for considering the malady to which the father succumbed as depending either upon the previous diseases in this family or upon the sanitary condition of the premises. A person in advanced life is often quickly exhausted by apparently trifling causes when the affection is located in the part of the body which was the seat of disease in this patient. It would hardly seem advisable to require physicians to notify the Board of Health in cases which do not present a real danger from communicability of the disease, and in many instances cases which from their initial symptoms appear very serious, prove, after a few hours, to be of less threatening character, and do not call for the services of the Board of Health. Physicians should also be sanitarians, and should be convinced of the necessity or advisability of notifying the Board before doing so.

Dr. Broughton replied that seven people out of nine sick, in quick succession, with acute disease, was in itself suggestive. The case of pneumonia was by no means an ordinary one. Its rare complications, occurring in a previously healthy person, were to be remembered. The phlegmonous inflammation was also a suspicious event. But, in his mind, that which made the inference of a common source of infection a just one, was rather the combination of circumstances than any single event in the series.

Dr. Shattuck observed that one very useful lesson, he thought, could be learned from this interesting paper, which was the necessity, at times, of obtaining the results of the examination of premises by the Board of Health from the records of the Board instead of trusting the statements of others who may have been misinformed or perhaps may willfully misrepresent the results of sanitary inspection.

The Board is usually prompt in responding to calls for its services, but sometimes it meets with much opposition in the performance of its duties, particularly in the direction of compulsory changes in house fixtures. Their first move is to notify the owner of the building of the defect, and of the required changes. After a reasonable time a second inspection takes place, and if the defect has not been remedied a second more peremptory notice is sent, and the matter is followed up till the changes are made.

Dr. Bowditch remarked that the law provides for a compensation from railroad and other corporations for injuries received on account of defective construction or faulty operation of their properties, and they are held strictly responsible for the safety of those whom they serve. Such a law should be made in regard to owners or holders of houses, by which the lives of their tenants might be better protected from the dangers which are associated with the modern method of building houses.

Dr. Blodgett spoke of a series of cases occurring under his care in one of the recently erected large hotels on the Back Bay, in which some defect of drainage was suspected, but was stoutly denied by the proprietor of the building, who asserted that every possible precaution had been observed, and nothing could be at fault in this direction. The continuation of suspicious circumstances, however, led to an examination of the drainage system of the building, when the surprising discovery was made that it did not contain a sewer trap of any kind. The adjustment of proper traps has been followed by an absence of all symptoms of sewer gas infection, and the house is now as healthful a place of residence as the majority of dwellings in this part of the city.

Dr. Blodgett asked the reader if he had eliminated any possible connection between the very filthy drinking water supplied to the citizens of Boston and the diseases of this household.

Dr. Broughton replied that he had carefully considered the possibility of contamination from water and milk, but could not consider either as the cause of the epidemic.

Dr. Bowditch spoke of the unwholesome condition of the present water supply, and observed that he did not dare to use it in his house for domestic or drinking purposes. He had no doubt that it was often the actual cause of disease, and in a far greater degree a very powerful accessory to other unfavorable influences in producing sickness. He then mentioned the fact that a commission had been appointed by the mayor of the city for the purpose of examining the condition of the water supply, and read the following motions, which were unanimously passed: —

Voted, That the members of the Clinical Section of the Suffolk District Branch of the Massachusetts Medical Society convey, through their secretary, to the Water Commission, lately appointed by the mayor of Boston, their appreciation of the extreme importance to the inhabitants of the city of the questions which the Commission was expected to investigate.

Voted, That as practicing physicians of the city of Boston we express to the Commission the earnest hope that it will not adjourn without a thorough and careful consideration of the whole question of the city's water supply, or without making some suggestion for future action in the premises, which may offer a reasonable hope of providing pure water, and of protecting the citizens against a recurrence of the great annoyances of the past.

Dr. Barnes said that any attempt on the part of the citizens to obtain a better water supply was met by the utmost indifference on the part of the Water Board, who had diligently obstructed and ingeniously opposed every effort at an investigation of a subject of such vital importance to every inhabitant of the city.

Dr. Barnes also produced the official report of the Water Board for the past year, and from it deduced the fact that the public has been deceived in regard to the quality and quantity of water delivered in the city, as well as in regard to the sources from which it was drawn, by repeated false statements and studied misrepresentations by the Board. The Board has ignored the testimony of many reliable citizens as to the offensive and dangerous condition of the basins from which the water is drawn, and appears to be utterly oblivious of any feeling of responsibility toward the citizens in regard to the character of the water it furnishes for their consumption. Dr. Barnes said he presented these facts in order to show the character of the men with whom we have to deal in any matter relating to the water supply.

Adjourned at 9.50 o'clock.

◆

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

May 13, 1882.

CERTAIN ACCIDENTS OR ABNORMAL CONDITIONS THE RESULT OF LABOR.

Dr. Boardman reported the case of a patient who consulted him on account of inability to retain her urine. She had been confined in July last under the care of a West-End physician, who effected delivery with the forceps. The child was still-born. The milk disappeared without untoward symptoms. The convalescence had been slow, and the catamenia had failed to reappear, nor had there been any indication of a menstrual nisus. Dr. Boardman, on examination, found a general sagging of the internal parts ; the uterus was of about the normal size, but its anterior lip, whether torn or sloughed off, was wholly gone up to the vaginal junction. Thorough probing failed to discover any passage to the fundus, the instrument appearing to meet a hard, tough, resisting membrane, the supposed result of a healing process following the loss of the anterior lip. The woman, under thirty years of age, is well formed and proportioned. Previous to her pregnancy her catamenia had always been regular and normal. She came under my care in November last, and by the latter part of January the symptoms for which she sought relief were corrected, and her general good health had returned, but up to the present time there has been no indication of the resumption of the menstrual function, and she was not pregnant when last seen, a short time ago. Possibly there is some canal leading to the cavity of the fundus, but diligent search, repeatedly made by myself and others, failed to detect it. The return of the menstrual flow, of course, will determine this point, and at that time, if the necessity arises, it will probably be an easy matter to make an opening to release the confined fluid.

A CASE OF SUPERINVOLUTION.

Dr. Sinclair reported the case of a woman, twenty-six years old, who, after the third childbirth, ceased to menstruate, and, although plump and well, was very nervous. There had been no menstruation for a year when she consulted Dr. Sinclair, who found an extremely small, infantile uterus. This would not admit a small uterine sound, but a probe could be passed up two and a half inches. She is now thirty-six years old. A year ago the husband had called to say that his wife was in charge of a physician who said that the trouble was due to a ruptured perinæum and lacerated cervix. Dr. Sinclair claimed an examination in his own defense, and found no laceration whatever.

PELVIC EFFUSION. ABSCESS. CHRONIC SEQUELÆ.

Dr. Lyman said that he had been called to the country to see a patient, forty-eight or fifty years old, who had been under the care of two physicians, and presented rather obscure symptoms. She was in bed, most of the time in bad general condition. On inquiry, Dr. Lyman ascertained that the patient had suffered, five or six years previously, with obscure symptoms about the pelvis, but this trouble had never been considered important, or connected with the present difficulty. It was found that she had had at times some discharge from the vagina. On examination a very offensive discharge was found to exist. There was no doubt, Dr. Lyman said, that the woman had had an old pelvic effusion, resulting in abscess, which had gone on, discharging from time to time, and in old cicatrices which had drawn the womb downwards and backwards, thus occasioning the various uncomfortable symptoms, pain in the back, etc., of which the patient complained. No malignant element was discoverable. The case was another illustration of the fact that pelvic inflammations are often overlooked, and for this reason occasion considerable unnecessary trouble.

SLOUGHING FIBROID.

Dr. Fifield said that he was asked to see in consultation a woman, fifty-four years old, abed, pallid to the last degree, and emitting a terribly offensive odor. She had been flowing for the previous nine months. Her physician had given her five drops of the fluid extract of ergot three times a day, and had made no vaginal examination. Dr. Fifield discovered a sloughing mass which he at first thought a cauliflower cancer of the uterus, and as temporary means advised an increase in the dose of ergot and large douches of hot water. He saw the patient a few weeks later with Dr. C. E. Wing. The large sloughing mass in the vagina was made out, and the anterior lip of the uterus could be reached, and finally, with great pressure, what seemed to be a large pedicle of the growth, which was cut through with the cord écraseur and the mass removed. This on further examination seemed to be a sloughing fibroid, even by microscopical examination. After the operation the hæmorrhage ceased. The color gradually returned to the patient, and when last seen she was looking quite ruddy and comfortable. Yesterday, the day before the meeting, there was some slight return of the flowing, and another fibroid could be detected coming down through the os. This has now been removed. Another microscopical examination seems to leave the question of malignancy doubtful. All bleeding has ceased, and she is able to do some work.

PRODUCTION OF THE ORGANIC CLIMAX OF SEXUAL FEELING APART FROM ANY SEXUAL APPETITE OR SEXUAL INTERCOURSE.

Dr. Fifield said that two years ago or more he had operated upon a woman for pus in the pleura.

She had a discharging fistula, and Dr. Fifield made an incision between the ninth and tenth rib, removing a large portion of one of the ribs. The patient did not improve after the operation, and had, what not infrequently occurs with chronic discharges of pus, an alteration in the kidneys leading to the presence of albumen in the urine. But what tormented the patient chiefly was a constantly recurring orgasm about the clitoris, half a dozen times a day, wearing her life out, in fact ceasing only with her life.

In another case, that of a very religious, morbidly depressed, melancholy person, to whom Dr. Fifield was called in consultation, this same orgasm recurred night after night, causing great torment. No vaginal examination had been made previous to Dr. Fifield's visit, when there was found what was first mistaken for a prolapsed ovary, of the size of a very large English walnut, upon the right side, and seemingly immovable. In the absence of other evidence of trouble the attention of the attending physician was called by Dr. Fifield to the presence of this growth or tumor. On seeing her again, this mass would rise when the patient lay down, and there was a question of fibroid with long pedicle. A pessary was introduced, which threw the growth forward and held it in place.

IRRITATION OF ABRADED SURFACES AS A SOURCE OF DISEASE WHICH MAY BECOME MALIGNANT.

Dr. Blake reported the case of a mother of two children. She had had pelvic abscess, and had been treated at two hospitals. The cavity, while the patient was at the City Hospital, had been drained and washed out from time to time with antiseptics, and had become very small. The patient finally went home, and was attended by a house officer, who continued the treatment, and after a time noticed a mass of granulations growing from the cavity. These were touched with caustic, but persisted and became evidently malignant, and the woman died.

Dr. Blake asked the question, Whether the frequent passage of instruments, etc., acted as the exciting cause of the malignant disease? There was no known hereditary taint in the case. In connection with the subject of sewing up the cervix, and the alleged dangers of a neglect to do so, it was interesting to know that the cavity of an abscess might become the seat of malignant disease. Dr. Blake himself thought that in the case reported the treatment had possibly something to do with the cause of the disease. In answer to questions, Dr. Blake said that the puncture of the abscess had been made high in the roof of the vagina; that the abscess had so extended as to fill up the pelvis while seeming to be entirely independent of the uterus. The treatment by injections had been going on for about six months, and involved the frequent passage of catheters. The patient was about thirty-three years old, and had been previously perfectly healthy. The disease was supposed to be the epithelial form.

Dr. Lyman remarked that epithelial disease was common enough on the vaginal wall, that it developed on lacerated cervix as a result of irritation, and that there was no obvious reason why it might not develop on the vaginal wall from a like source. He had yet to see a permanent cure of the epithelial disease, either by operation or local applications. As illustrating the use of Chian turpentine, Dr. Lyman referred to the case of a patient twice in the hospital within the last three or four years, for the removal of an epithelial mass from the vagina, the cervix, and body. The vaginal growth was entirely isolated from the diseased cervix and uterus, and enucleable more easily than an orange from its skin, and coming so near the cavity of the rectum as to seem to threaten to break through into it. Not only was the vaginal growth removed, but the cervical and the uterine down to healthy tissue on two different occasions, and has now recurred again, and the patient is gradually failing. She has taken the turpentine steadily since last August, first in pills, now in powder, six or eight grains in sugar of milk, three or four times a day. If she leaves it off the pain comes on immediately. At times she passes quite large masses of this epithelial growth. Whether the turpentine will have any permanent effect is very improbable, but attention was called to the article as an admirable remedy for the relief of pain and hæmorrhage.

Dr. Hosmer reported the cases of two sisters who had been under his care, one after the other, one having died of malignant abdominal disease, the other suffering from abdominal disease, cystic in part, requiring frequent tapping, bringing on death by a slow process of exhaustion.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.[1]

TONGUE AND LARYNX FROM A CASE OF ELEPHANTIASIS GRÆCORUM.

Presented by **Dr. A. C. W. Beecher.**

The case from which these specimens were removed was reported in the *Photographic Review of Medicine and Surgery*, No. 6, vol. i., August, 1871. Mr. ——, aged twenty-six years, born in Cuba of Spanish parents, married. His father was living when the patient died in 1872; the mother died when he was an infant. He was wet nursed by a colored house-servant, who was unmarried, but had had several children by different individuals. She was healthy as far as known, with the exception of sores upon her feet. He had none of the diseases of early life except measles and mumps. His health was good up to fifteen years of age, when superficial yellowish-pink spots appeared upon his body, accompanied by neither pain nor itching. They remained about one year, and disappeared during a voyage to Spain. While there he was attacked with neuralgia of the little fingers, extending along the course of the ulnar nerve to the elbow, which was relieved, and he returned to the West Indies. Six months after his return he experienced a second attack, which lasted for one month. In 1862 he came to this country to study, and after one year became the subject of repeated catarrhs, chiefly affecting the throat. Itching of both fore-arms and legs soon after developed. In 1866 œdema of the hands and feet, which did not extend beyond the wrist or ankle, set in, producing a sensation of stiffness of the fingers and toes. Blebs then suddenly appeared in varying size upon the dorsum of the hands and fingers, extending over the whole length of the latter. At times a sharp pain in the hands and fingers, arousing him from sleep, would herald one of these bullous attacks. The bullæ contained a whitish opaque fluid, and when burst were succeeded by dark-brown scabs, transversely cracked and fissured over the joints. Under these crusts were excavated ulcers.

---

[1] Concluded from page 566.

The finger tips and the ends of the toes presented similar ulcers, over which the nails grew, and these latter being brittle broke off when long. Next, frequent hæmorrhages from the nose, coming on while laughing or in mental or physical excitement, were noted. The nose became tender, was much swollen, and discharged moderately offensive pus, and the bridge of the nose began to sink, gradually assuming its present appearance (a photograph was here shown); a year after the hands were attacked the face became similarly affected, the ulcers on healing leaving distinct cicatrices. The eruption never entirely ceased, new bullæ and ulcers forming while others healed. There was marked emaciation. There was absence, in many spots, of the hair of the body, which was everywhere scanty, and the skin was of a dusky hue. The muscles of the arms were much wasted, and the skin presented small white cicatrices. Over both patellæ and olecranon processes large, hard, firm reddish nodules were seen. The hands were much deformed, with wasted, contracted fingers, having numerous small, hard tubercles scattered beneath the skin of the dorsal surface of the hands. Numerous ulcers, mostly covered with irregular black scabs, covered the back of the fingers. A markedly varicose condition of the veins near the wrist was observed. The hair of the head was normal in quantity, but was hard and harsh, while there was total loss of eyelashes and eyebrows, and the beard was scanty. There was a large, hard tubercle over one frontal bone, near which was an old ulcer. The nose was much sunken, there was an ulcer over the right zygoma, covered by a black, rupia-like scab, the face was marked with scars, and the ears were likewise deformed with traces of numerous cicatrices. Many of the teeth were decayed and broken off close to the gums. The tongue was much thickened, with greatly enlarged papillæ. The velum palati was almost gone from ulceration, and yellowish-white tubercles existed in the pillars of the fauces. The larynx was much contracted by thickening of its mucous membrane. The epiglottis was about twice its normal thickness, and had several well-marked tubercles upon it. The voice was much impaired, weak, and had a peculiar husky sound. There were deep, sloughing ulcers over each tendo-Achillis. Tactile sense was very much impaired, as in the dorsum of the hands, where the sense touch was almost absent, and what was recognized was referred to some point in the neighborhood of the point of contact. The sense of pain was almost entirely absent in the hands and fore-arms, becoming more marked as the body was approached; a pin passed through the pulp of the middle finger gave absolutely no pain. The difference between very hot water and that of an ordinary temperature was readily perceived; moreover, there was general increased cutaneous sensibility to temperature changes. Taste and smell were somewhat impaired. Very slight anæsthesia of the trunk existed. Sight was good, although prolonged use of the eyes was painful. The general health of the patient was fair. There seemed to be no trace of venereal disease. Sexual power was absent. Frequent neuralgic pains of the legs and arms were complained of. The atrophy of the hands, feet, fingers, and toes was appreciable from month to month. The cornea next became ulcerated, the conjunctival surfaces became adherent, and almost total blindness ensued. Swallowing was almost impossible towards the last, owing to the pain produced by the throat ulcers, and because from imperfect closure of the rima glottidis fragments of food entered the larynx, producing violent and exhaustive coughing. Respiration was also so much impeded that he died October 29, 1872, partly from dyspnœa, partly from starvation. Up to the death he suffered intensely.

Autopsy. Rigor mortis well marked. Great emaciation of the entire body noted. The surface of the tongue was fissured, the papillæ enlarged, with the remains of tubercles well marked towards its base. The epiglottis was curved on its long diameter, thickened and stiff, with its upper margin eroded by a large ulcer. A deep ulcer was situated in the mucous membrane near the apex of the left greater cornua of the hyoid bone. Narrowing, from thickening of tissues, involved the trachea at its upper part, and produced such stenosis of the chink of the glottis that an ordinary quill could not be passed between the vocal cords. Upon section of both ulnar nerves near the elbow extensive degeneration was detected. This case was examined both by Dr. Duhring and Dr. R. M. Bartlett, — the latter making a laryngoscopic examination, — who both considered it to be of the mixed variety, namely, tubercular and anæsthetic leprosy. The case is interesting both from its rarity and the possibility of other cases being brought here from California and New Brunswick, in both of which places it is not uncommon. Again, its resemblance to syphilis at first led me into error, although, said Dr. Beecher, I recognized something strange about the disease. The late Dr. Maury saw the case with me, and had no doubt of its syphilitic nature until Dr. Duhring's examination convinced him that it was really leprous. Erasmus Wilson says: "The resemblance to secondary syphilis is so striking that an error is certain, excepting on the part of those who have had an opportunity of seeing and observing leprosy.

DR. WILSON asked whether the family history had been investigated.

DR. BEECHER replied that he had carefully questioned all concerned, but had ascertained nothing special, except that when such cases occurred in wealthy families, the fact was always hushed up.

DR. WILSON said that in this connection he would call the attention of the members to a very able article in the last issue of *Hays' Journal*, where the writer took the view that leprosy was contagious, maintaining that it should be investigated where it was of *rare* and recent occurrence. Dr. Wilson also referred to its occurrence among recent immigrants in certain of our northwestern states.

DR. CARL SEILER said that Dr. Beecher had asked him to examine the specimens of the larynx and tongue of the case of elephantiasis. The dorsum of the tongue was deeply furred, and the papillæ appeared enlarged. The epiglottis was thickened, very stiff, and rolled on its long axis like a dry leaf. On its upper free margin was a crescentic ulcer with raised edges, and numerous smaller roundish ulcers were scattered over the laryngeal surface of the epiglottis. Extensive ulceration of both ventricular bands and vocal cords existed, so that the opening of the ventricles was almost entirely occluded. The ulcers were symmetrical, and most marked towards the anterior insertion of the vocal cords. About one quarter of an inch below the cords was a cicatricial band projecting from the sides of the subglottic cavity, and leaving an elliptical opening through which a crow-quill could hardly be passed. Below this obstruction the mucous membrane of the subglottic cavity was studded with small round ulcers, while the trachea seemed healthy. No further lesions could be detected by the naked eye, although doubtless such had existed, but had been obscured owing to long preservation in alcohol. Dr. Seiler regretted the absence of the records of the laryngoscopic examination made before the patient's death, still the lesions seen in the specimen would explain the symptoms of dyspnœa, aphonia, and dysphagia, and it was astonishing how the patient could have respired at all through the narrow opening left by the cicatricial tissue below the glottis. The chief interest, however, centred in the great similarity of the lesions in this unique case with those found in syphilis and lupus of the larynx. He had seen ulcerations in syphilitic laryngitis almost identical in shape and location with those seen in the specimen, and he remembered having seen two or three specimens of lupus of the larynx when in Vienna, which bore a strong resemblance to syphilis. Lupus and leprosy of the larynx could not be diagnosed from one another by laryngoscopic examination alone, but other signs and symptoms outside the larynx had to aid in the diagnosis. Thus in syphilitic laryngitis there were always sharply defined bands of a deep red color on the free margin of the velum palati. In lupus affections of the skin always preceded, coexisted with, or shortly followed, the manifestations of the disease in the larynx, while in leprosy the larynx was usually attacked later in the disease, when other portions of the body clearly showed marks of the pest.

DR. LITTLE remarked that having conversed with Dr. F. N. Enders, who had seen a great many cases of leprosy in the Sandwich Islands, he had been interested to note that the eyelids were affected in the early stages, ectropion resulting, and the conjunctiva and cornea, or even the whole eyeball, becoming involved. The affection of the eyelids is sometimes the first symptom, or occurs during the first or second year of the disease. The lids were involved in the case described, and the eyeball subsequently.

DILATATION AND ATHEROMA OF THE PULMONARY ARTERY WITH AN OPENING THROUGH THE INTERVENTRICULAR SEPTUM.

Presented by DR. BRUEN.

Examination of the heart: Left side, slight ventricular hypertrophy, mitral valves somewhat thickened at the margins with roughening of their auricular aspect, valves competent; the left auricle is normal, and also the aorta and the aortic valves. Examination of the right side is of most interest. Two of the semilunar leaflets at the mouth of the pulmonary artery are nearly destroyed by atheromatous changes, the third segment is much thickened, and projects as a leaf-like fold, roughening the mouth of the pulmonary artery. This vessel is dilated to nearly twice its normal size, forming really an aneurismal dilatation. The vessel walls are covered with a fringe of vegetations of inflammatory origin, due to atheromatous changes. The right auricle is very small and imperfectly developed, the bulk of its cavity being formed by the auricular appendix.

The tricuspid valves are much thickened, but are competent, probably. Between the two ventricles is an orifice large enough to admit the forefinger. It is directly beneath one of the thickened leaflets, and is lined with endocardium, and must have allowed a free interchange between the blood of the two ventricles. The walls of the right ventricle are thickened, its cavity somewhat dilated. Dr. Bruen said that this case was interesting because the perforation of the ventricular septum is often congenital and dependent on obstruction of the orifice of the pulmonary artery, the perforation being due to the pressure of blood within the replete right ventricle. This pressure causes an arrest in the development of the ventricular septum. The pathology of the present case, probably, is as given above, but there was no pulmonary artery obstruction. A similar case is recorded in the Medico-Chirurgical Transactions, volume xv., by Fletcher (2). There was no cyanosis. Cyanosis is usually dependent on a deficiency of cardiac evolution or else on retarded evolution of pulmonary artery or aorta. As a consequence there is deficient cardiac power to carry on the circulation, or the pulmonary artery or the aorta are narrower than normal, so that in any of these conditions venous repletion results and cyanosis. Mixture of venous and arterial blood is, then, not the usual cause of cyanosis, although it may be a factor. Walsh says, grant that perforation of the ventricular septum coexist with constriction of the pulmonary artery orifice, and cyanosis seems to become a certainty. In our case there is an example of incomplete development of the ventricular septum and deficient development of the right auricle without cyanosis.

Pulmonary artery disease is consistent with a fair amount of general health, and that compensation by the right heart may occur just as in cases of aortic disease. Descriptions of pulmonary artery disease call attention to bronchitis, pneumonia, hydro-thorax, as sequential states. In our case no such complications were present until just before death, when she finally succumbed to congestion of the lungs added to the cardiac state. The aneurism of the pulmonary artery formed a pulsating tumor on the left side of the sternum, between the second and fourth ribs, extending outward from the border of the sternum, and including an area covered by a trade dollar. Over the tumor a post-diastolic and a presystolic bruit-like murmur could be heard at a point between the second and fourth ribs, while close to their junction with the sternum a hoarse systolic murmur could be heard. The bruit was localized, the heart systolic murmur was carried out into the entire arterial system.

Dr. Bruen then detailed at length the differential diagnosis of these murmurs. During life dilatation of the pulmonary artery with mitral obstruction had been the diagnosis. The patient was a woman of twenty-five years, a syphilitic, and was under observation from November, 1878, to July, 1882.

DR. ESKRIDGE had not had any difficulty in differentiating a presystolic from a diastolic murmur. He thought the leathery thickening of the mitral valves in the specimen presented by Dr. Bruen was sufficient to give rise to a mitral presystolic murmur. If we adopt the theory of Dr. Austin Flint, Sr., that a mitral presystolic murmur may occur in aortic regurgitation when the mitral valves are perfectly healthy, it seemed to him that there was no difficulty in accounting for the presystolic murmur from the regurgitant blood from the pulmonary artery into the communicating right and left ventricles of this case, especially as thickening, loss of elasticity, and some rigidity of the mitral valves existed. The chronometry of the pulsation that occurred in the left second intercostal space he thought could have been obtained by adopting Sanson's modification of Balfour's method of comparing the time of the occurrence of precordial pulsations.

DR. SHAKESPEARE said that he had been struck with one point of great interest in connection with inflammation of the lining coat of the pulmonary artery as evinced by the vegetations. These growths are very rarely found in the venous current. He had certainly never seen any other specimen, although he did not doubt that some had been seen or reported by other observers. Arterial blood seemed a requisite for the evolution of such diseased action. Evidently the site of the perforation, being just below the aortic and pulmonary valves, brought about just this necessary prerequisite, namely, abundance of arterial blood with the venous.

DR. WILSON called attention to the evident relation between the incomplete ventricular septum and the condition of the pulmonary artery, which is greatly dilated and atheromatous, and presents the appearances often met with in the aorta, very rarely in this vessel. The wall of the right heart is relatively thickened. This fact, together with the position of the opening in the interventricular wall, which favors the flow of the blood from the left ventricle towards the pulmonary artery, render it probable, almost certain, that the more forcible contraction of the left heart has constantly forced a portion of its arterial blood into the right heart, thus increasing the current entering the pulmonary artery, and occasioning first, hypertrophy of the right ventricle, and second, a subacute inflammatory process in the pulmonary artery itself, in consequence of the increased volume and force of the blood current. Dr. Shakespeare's observation that such growths as are here seen require for their existence arterial blood is in accordance with this view.

SARCOMA OF THE PROSTATE GLAND.

Presented by **DR. W. E. HUGHES.**

The specimen which I have the pleasure of presenting was taken from a patient in the University Hospital under the care of Dr. H. K. Wharton. W. J., aged thirty-five years, admitted to the hospital suffering from retention of urine. Before his admission numerous unsuccessful attempts had been made to empty the bladder by means of a catheter. On admission the patient complained of much pain in the hypogastric region, which was the seat of a smooth, rounded swelling, reaching almost to the umbilicus. He stated that he had gonorrhœa some years previous, which had been followed by a troublesome stricture, which had been perfectly relieved by the passage of bougies. For more than a year previous to his admission he had suffered at irregular intervals from difficulty in urination. The urine had never been bloody, but its passage had often been attended by great pain. It was found impossible, on account of numerous false passages, to introduce a catheter into the bladder. On introducing a finger into the rectum the prostate was felt smooth, rounded, and immensely enlarged. The patient was put to bed, ordered suppositories of belladonna and opium, and a hot poultice to the abdomen. This treatment relieved him almost immediately, and urination became freer. For a few days he did well, but the difficulty in urination soon began to increase, and by the fifth day after his admission the symptoms had become so urgent that it was deemed advisable to repeat the attempt to pass a catheter. This attempt was as futile as the first. Then aspiration of the bladder through the abdominal walls was attempted, but only a small quantity of blood was obtained. In introducing the canula it gave the sensation of passing into a solid body, and careful palpation revealed the fact that there really was a solid body apparently occupying the whole bladder. It was now decided to open the urethra at the base of the bladder, through the perinæum, and the operation known as Cock's was selected. The operation was followed by the escape of a small amount of urine. After this the patient did well, with the exception of an attack of dysentery, until the ninth day after the operation, when peritonitis suddenly developed. He died on the following day.

Autopsy (two hours after death). Upon opening the abdomen a thick, yellowish-red, purulent fluid, having a urinous odor, was found bathing the intestines, the coils of which were everywhere bound together by recent adhesions. The omentum was in places firmly adherent to the intestines, and contained numerous irregular, nodulated masses, varying in size from that of a pea to that of a hen's egg. These masses on section presented a whitish-yellow color. In the lower part of the abdominal cavity was a large, irregularly-shaped mass, firmly adherent to the small intestines, colon, omentum, and walls of the pelvis. On careful dissection the tumor was found to originate in the prostate gland. On section it presented in parts the characteristics of schirrus, in others those of encephaloid, in other places there were large loculi, with hardened, irregular, friable walls, filled with a liquid similar to that found in the abdominal cavity, though no connection between these loculi and the abdominal cavity could be found. No trace of normal prostate gland or seminal vessels could be discovered. The bladder, containing a few ounces of urine, was found in front of the upper portion of the growth, its upper boundary almost on a line with the umbilicus; its anterior wall was apparently perfectly normal, its posterior wall, resting on the tumor, was thickened, raised, red, and velvety.

The ureters were normal, and opened in the usual position. The urethra, as far as could be seen, ran along the anterior surface of the tumor, and was not involved by it. The weight of the growth was five pounds two ounces. The kidneys, stomach, lungs, and intestines were normal. The peritonæum and capsules of the liver and spleen contained several secondary growths. Microscopic examination showed the growth to be a typical, small, round-celled sarcoma. The secondary deposits were similar in structure to the primary growth. The submucous and muscular tissues of the bladder wall were somewhat infiltrated. The growths in the capsules of the liver and spleen had commenced to penetrate these organs.

MELANOTIC SARCOMA OF ORBIT WITH METASTASES TO LIVER, ETC.

Presented by **DR. SHAKESPEARE.**

The patient was an elderly woman who had been operated upon by Dr. Hyle at the Episcopal Hospital some six months before death, the contents of the orbit having been thoroughly removed. Recurrence took place, the cavity being filled with a black, fungating mass; the left nostril gave vent to a blackish discharge, and the various internal organs became involved, notably the liver. Death took place from exhaustion. Most of the metastases are entirely melanotic, but some in the liver show at their periphery a distinct whitish zone. Dr. Shakespeare remarked upon the singular fact that orbital growths were usually melanotic, although they might not spring from the choroid coat of the eye, as in this case, where all pigmented structures had been removed months ago.

Medical and Surgical Journal.

THURSDAY, DECEMBER 21, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly b Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

REPORT OF THE COMMISSIONERS APPOINTED TO INQUIRE RESPECTING SMALL-POX AND FEVER HOSPITALS IN LONDON.

We have before us a bulky English Blue Book of four hundred pages, containing the report submitted to Parliament last August, of a Commission, known as the Hospitals Commission, appointed to inquire concerning Small-Pox and Fever Hospitals in London. The Commission was appointed about a year ago, and consisted, besides several laymen, of Sir James Paget, Professor Burdon-Sanderson, Dr. Alfred Carpenter, Dr. W. H. Broadbent, and Mr. Jonathan Hutchinson. The report deals virtually with the prevention and control of epidemic infectious diseases in London and its neighborhood. Before the appointment of the Commission much trouble had arisen in regard to some of the small-pox hospitals already established in London by the Metropolitan Asylums Board, on account of the alleged increased propagation of small-pox around them. Two, namely that at Hampstead and that at Fulham, had been closed, and the patients transferred to hospital ships on the Thames, pending the settlement of the questions involved by the courts, and reports concerning Hamerton and Fulham Hospitals, by Messrs. Bridges and Powers, had been submitted to the Local Government Board, as well as a report on the Use and Influence of Hospitals for Infectious Diseases, by Dr. Thorne Thorne, all three of which appear as appendixes in the present Blue Book, and are very thorough papers.

These reports, and especially that of Mr. Powers, seem to have had much weight with the Commissioners in reaching their own conclusions. Their own report, based upon the minutes of evidence, the appendixes mentioned, and others — among them one by Mr. Shirley Murphy, formerly a resident medical officer, respecting the influence upon its neighborhood of the London Fever Hospital, — is an interesting and valuable document, worthy the attentive consideration of our profession, not merely on account of the names attached to it, but as containing curious matters touching the history of small-pox in London, and careful conclusions concerning the prevention of epidemic diseases and sanitary administration in large centres of population.

The report strongly recommends the compulsory notification of infectious diseases, and the immediate and complete isolation of those attacked, with the thorough disinfection of the surroundings. Such a course, combined with the removal of all local causes of disease, and the constant employment of means of disinfection, would result in a great diminution of infectious diseases in general; and small-pox would be still further reduced if vaccination could be made more effectual, and re-vaccination more frequent. All evidence goes to show that well-conducted fever-hospitals involve no appreciable risk to the neighborhood, and the Commissioners were satisfied that under proper precautions a limited number of small-pox cases may, without sensible risk of infection, be received within the precincts of the fever-hospitals.

They also report that the existing large small-pox hospitals, in each of which — there being five of them in London — several hundred cases are at times collected under one roof, do cause, in their present shape, an increase of small-pox in their neighborhoods, and that this fact is clearly established by the experience of those hospitals during the last ten years; that is, since the remarkable epidemic of 1872. As to what proportion of this increase of small-pox in the neighborhood of large hospitals is due to "personal communication," and what proportion to "atmospheric dissemination," the Commissioners naturally do not commit themselves; but they evidently felt that "personal communication" was not proved to be adequate to the explanation of the whole phenomena, and that "atmospheric dissemination" is not shown to be in the highest degree improbable, and hence insist that it is essential in the construction and management of these hospitals to guard with the utmost care against both sources of danger. The former may be met by stringent rules strictly executed; and against the latter Dr. Burdon-Sanderson offers a plan for an especial system of ventilation and atmospheric disinfection by hot air.

In concluding his report to the Local Government Board on the Fulham Small-Pox Hospital, Mr. Powers raises this question: whether the difference between the hospital and separate private houses in the same district, in their ability to distribute small-pox to neighbors, is mere matter of concentration and demonstrability, or is it a wholly different affair, a something that has a different quality, intensity, or potency from anything belonging to small-pox in its several nests of origin, consisting in an alteration in the quality of the small-pox material, an exalted faculty of reproducing its kind attributable to the bringing together of many differing, while all actively endowed, varieties of the disease; in the same fashion that longer stamened primroses and shorter stamened primroses, flowers of the same species, propagate better than primroses which all have the same relation of stamen to ovary. These questions Mr. Powers does not answer, but expresses a suspicion, obtained during his inquiry, that the latter may hereafter be found to be the truer solution.

Since 1875 small-pox has been on the increase in London, a course naturally regarded as preventable, and the Commission concludes, from tables covering the years from 1838 to 1881 inclusive, that whilst under tolerable control in the country its evil influence has, during the last twenty-one years, been gradually but fitfully gaining ground in London.

London will soon have 4,000,000 inhabitants, and it is estimated that administrative arrangements and appliances for 3000 fever patients and 2100 small-pox patients will be ample provision for ordinary emergencies. The number of cases of small-pox under treatment at any one time in a year, it is found, may be fairly estimated from the mortality in that year, being on an average about equal to it. In only three years out of the forty-one considered has the mortality from small-pox in London exceeded 2800. The Commission believe that it is not necessary to make provision for more than 400 or 500 cases in London itself, the remainder being capable of transportation to a distance. This number, it is thought, can be safely divided among existing small-pox and fever hospitals, thirty or forty patients being allotted to each locality.

◆

FREE TRADE IN DIPLOMAS.

THE officers of the so-called "Bellevue Medical College" have been examined before the United States Commissioner on charges of using the mails for fraudulent purposes. Evidence was offered by the government, and not contradicted, to the effect that the "college" had issued degrees and diplomas to individuals grossly ignorant of the theory and practice of medicine, and after a farcical course of instruction covering a few weeks or less. The defendants claimed simply that they were empowered to do all that was alleged by the laws of Massachusetts. It appeared that the institution was legally incorporated, and that according to the corporation laws and its charter it enjoys all the privileges of other medical colleges. This was admitted by the government attorney. The Commissioner decided that these diplomas, representing neither study nor medical knowledge on the part of the recipients, were nevertheless not "fraudulent," because they were issued in accordance with authority conveyed to the officers by the State.

In the words of Commissioner Hallett, "We must, then, sit in judgment upon the laws of Massachusetts. The State has authorized this college to issue degrees, and it has been done according to legal right. It cannot be argued that the issue is fraudulent any more than an allopath can claim that a homœopathic college issues degrees fraudulently. The law makes the faculty of the college the sole judges of eligibility of applicants for diplomas. There is no legal restriction, no legal requirement. If the faculty choose to issue degrees to incompetent persons, the laws of Massachusetts authorize it. This is not, therefore, a scheme to defraud under the statute. The defendants are discharged."

This institution holds its charter under the statute providing for *manufacturing* and other corporations. Whatever goods the diploma mill may turn out, if only satisfactory to the manufacturing corporation, have received in advance the approval of the State, and must receive the protection of the law.

Under this decision this new branch of industry will receive a powerful impetus. Buchananism, expelled from its birthplace by an inappreciative public, has only to come to Massachusetts to receive all the impetus of a combined "protection" and "free trade."

◆

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE.

THE increasing importance of the Marine Hospital Service is shown by the corresponding increase in the size of its reports. In 1872 it failed to number one hundred pages; in 1882 it exceeds three hundred, and bids fair at no distant day to rival in bulk various other productions of the Government Printing Office. Nearly two hundred pages of the report are occupied with cases from the hospital practice of the department. The first one hundred are devoted to what may be called the report proper of the department, a large portion of which consists, as usual, of tables of diseases occurring in the different departments, of which it is unnecessary to speak. As a whole the present report seems more than ordinarily interesting, and illustrates better than ever before the peculiar work the service performs. In accordance with the prevailing nomenclature of the day were the bureau not a portion of the government machinery it would assume the name of the Association for the Prevention of Cruelty to Seamen, and would be puffed by the newspapers and enriched by bequests. Under the heading Additional Hospitals, Dr. Hamilton repeats the constantly recurring plea for a National Sailors' Home for the aged and infirm sailors who have outlived their sea-going days. It seems to us that no class of humanity can call more loudly for relief than the old salts. Many of them have at some time served in the navy of the United States, and about them all clings a salt-water flavor which an acquaintance with certain members of their class tends to foster rather than abate. One who knows the work of the Marine Hospital Service cannot fail to recall old fellows able in the summer to ship as cook, perhaps, on some little coasting schooner whose additional crew beside the captain consisted of a boy and a dog, or in some way to eke out an independent existence on the outskirts of his craft, and who when winter came used on some pretext or other to find admission to hospital. The more stringent application of hospital regulations deprives him of his winter's refuge, which he must now seek in the almshouse.

The Surgeon-General has taken pains to inquire into the execution of the regulations requiring the use of lime juice and fresh provisions on merchant vessels of the United States, the occasion being the occurrence of six cases of scurvy admitted to hospital at Astoria, Oregon.

The deaths occurring on voyages from foreign ports to this country have been the subject of examination, and changes have been made looking to greater accuracy in future returns. The small-pox occurring during the past year is the subject of a short consideration. With the materials at hand and the ambition of the bureau to direct the hygienic measures of the nation it would seem as though a more valuable contribution to our knowledge of the modes by which the disease is spread by vessels might have found place in these pages.

The proposed bill for the reduction or abolition of the Marine Hospital tax gives an opportunity for a fair statement of the return actually made to the sailor for his forty cents a month. Further on in the report are given accounts of various marine disasters and the means used by the Marine Hospital Staff for the care of the sufferers.

Life-Saving Stations, Revenue Marine, and Marine Hospital Service seem to work harmoniously together under the direction of the Treasury for the good of the sailor, and we should regret to see the usefulness of the latter affected in any degree by envious legislation. As the report is for the operations of the service up to June 30th, the end of the fiscal year, no mention is made of the work of the service as a health board.

The clinical portion of the report contains many extremely valuable observations which we are glad to see preserved. Perhaps no physicians in the United States see a more varied and interesting class of diseases than the Marine Hospital surgeons. It has been the aim of the service for many years to encourage the publication of cases. Of the various observations it would not be impossible to find abundant opportunity for criticism, but we can hardly imagine a more effectual way of enforcing care on the part of medical officers than the requirement of a full report of all autopsies and their subsequent publication.

The work of the Marine Hospital Service is exceedingly important in our eyes, not only to the sailor when he is sick, but to American shipping, and to the sailor when engaged in his ordinary occupation, from the general oversight given to matters pertaining to the hygiene of the forecastle. We believe the work to be done with increasing efficiency from year to year as the service grows older and the men more accustomed to their duties.

MEDICAL NOTES.

— Dr. Paul F. Mundé has been appointed gynæcologist to Mt. Sinai Hospital, New York, to fill the vacancy caused by the resignation of Dr. E. Noeggerath.

— An Obstetrical and Gynæcological Society was formed in Washington, D. C., during the past month, with Dr. S. C. Busey as President and Drs. Joseph Taber Johnson and W. W. Johnston as Vice-Presidents.

— Aberrations of Audibility was the title of a paper recently read before the Philosophical Society of Washington by a gentleman formerly connected with the Light-House Board. The subject was considered with special reference to the fallibility of fog-signals, the sound of which is not heard equally in all directions from its source. This variation in sound intensity does not seem to be dependent altogether upon the wind, but upon the differing relative density of different layers of air. An investigation of the Light-House Board into a steamship disaster in which it was claimed that the fog-signal was not sounded disclosed the fact that it was acting properly, but that while there was no lack in the volume of the sound emitted by the signal, there was often a decided lack in the audition of that sound, so much so that it would not be heard at the intensity expected, nor at the place expected; indeed, it would be heard faintly where it ought to be heard loudly, and loudly where it ought to be heard faintly; that it could not be heard at all some at points, and then further away it could be heard better than near by; that it could be heard and lost and heard and lost again, and all within reasonable ear-shot, and all this while the signal was in full blast and sounding continuously.

PHILADELPHIA.

— Dr. J. Forsyth Meigs is very ill with pleuropneumonia; he is a son of Professor Charles D. Meigs, and author in connection with Dr. Pepper of the well-known Diseases of Children. He has been for many years Physician to the Pennsylvania Hospital.

— Prof. Alfred Stillé, being the only nominee for the office, will probably be elected President of the College of Physicians at its next meeting, to succeed Dr. W. S. W. Ruschenberger, who declined renomination.

— At the December meeting of the College of Physicians, Dr. W. W. Keen exhibited for Dr. George T. Porter, of Bridgeport, Conn., a specimen of vesical calculus of the xanthic oxide variety, the first of the kind reported in America, and it is believed only the eighth on record. The stone was cut in half; one half was deposited in the Mütter Museum, the other was to be presented to the Jefferson Medical College. A full description and a representation of the same, it was said, had been published in the *New England Medical Monthly* for May, 1882. In the discussion which took place it was stated that Dr. Levis had removed a similar stone in 1876 from a patient at the Pennsylvania Hospital, the chemical character of which had been recognized, but it had not been reported; it will probably be presented at the next meeting of the College. Dr. James Tyson reported a case of cystine calculus.

Dr. J. Ewing Mears presented a report of a case of extra-uterine pregnancy, which was read by title, but which will shortly appear in full in these pages.

Reports were received from various standing committees showing satisfactory progress during the past year. Some changes have been made in the library, which is rapidly increasing in size and influence. By a vote of the College it was decided to open the library in the evenings of every day except Saturday, commencing with the first of the year, the hours being from eleven A. M. to four P. M., and from seven to ten P. M. This experiment will be continued for three months, and if it is found desirable by the Fellows the change will be made permanent.

— The Nurse Registry Bureau of the College of Physicians made a very satisfactory report through the committee having it in charge. All the running expenses, including salaries to superintendent and messenger, were paid, and a surplus remained as the result of the first year's working. A number of extra expenses in fitting up rooms, providing furniture, outfit, etc., were paid out of a special fund of nearly twelve hundred dollars collected for the purpose by friends of the enterprise, of which about one half remains unexpended. The fees from applicants for nurses now average about eighty dollars per month, and there have been registered in all nearly three hundred nurses. Apart from the gratifying fact that the Bureau under its very able management has been self-sustaining from the beginning, it has proved itself extremely valuable to the community, and has received repeated favorable notices from the press. It is no longer merely a convenience, it is a necessity, and will increase in usefulness as its character becomes more widely known.

— Provost Pepper has announced the addition of $23,000 to the endowment fund of the University of Pennsylvania. By the terms of a recent conveyance of land by the city fifty free scholarships in the University are opened to competition among the pupils of the public schools of Philadelphia.

Miscellany.

A LETTER FROM LONDON.

THE LONDON MEDICAL SCHOOL FOR WOMEN.

London, *November*, 1882.

Dear Mr. Editor, — While here I have taken advantage of an opportunity, which I owe to the kindness of Professor Huxley, to visit the Woman's Medical College. In view of the general interest felt in America in the medical education of the other sex, and since, too, the agitation in favor of the admission of women to the Harvard Medical School has made this problem prominent before both the profession and the general public, I was particularly glad to gather information about the London School in Henrietta Street, Brunswick Square.

A small number of ladies studied medicine several years ago at the University of Edinburgh, but certain difficulties arose which led to further complications, and finally to the retirement of the female students. Miss Jex-Blake immediately devoted her energies to the establishment of a school in London for women only, and was soon joined in her efforts by others, notably Mrs. Garrett-Anderson, Dr. Anstie, Burdon-Sanderson, Professor Huxley, and more persons whose names are familiar.

The school was opened in October, 1874, with twenty-three students, and has grown since then slowly and steadily. It may therefore be considered successful and permanent, although its funds are very limited. At the start the school had £1000, obtained through private subscriptions from friends of the movement. They obtained the lease of an old-fashioned two-storied house, the private garden of which secured light and air on one side. A very competent corps of instructors was gathered, including a number of distinguished teachers from other London schools. Collections of specimens were immediately begun, and laboratory equipments started. The opportunity of providing the necessary oral and practical instruction was thus at once made certain of.

For three years they were unable to make any arrangement for the proper clinical training of the students. During that period the scholars shifted as best they could. They were admitted to Mrs. Dr. Anderson's new Hospital for Women, where they could obtain a valuable though limited experience, which, however, did not qualify them for examination, as the certificates of a small special hospital are not recognized by the English examining boards. This fatal deficiency was obviated in 1877, when an arrangement was entered into for five years with the largest hospital in the neighborhood of the school, that on Gray's Inn Road. The agreement admits the students of the Henrietta Street School to clinics in the hospital, the contract holding for five years, the school making an annual guarantee to the hospital of, at present, £715.

To complete the success it was necessary to secure the admission of women to the examinations qualifying them to practice. Here, especially, was the field of agitation in favor of the desired reform, and rebuffs and discouragement were meted out abundantly to those interested in the venture. In 1876, with the support of the government, Parliament passed a bill *enabling* all the nineteen British medical examining bodies to confer their licenses or diplomas upon women. Under this act the Irish College of Physicians gave the first degree ever granted to a woman in the Kingdom of Great Britain and Ireland. Its recipient was Miss Edith Pechey. In the fall of 1876 another lady applied for admission to the medical examinations of London University. The application led to a very interesting and somewhat protracted discussion, chiefly because the Convocation voted against women being admitted to the examination for the medical degrees, before the question of their admission to all the degrees of the university had been considered. Thereupon the senate placed before Convocation a supplementary charter providing that all degrees of the university shall be open to women. It was carried by two hundred and forty-one against one hundred and thirty-two. Since then women have also been admitted to the examinations of the Society of Apothecaries and the Royal University of Ireland.

The three first requisites have thus been met: (1) Lectures, recitations, and practical work; (2) clinical instruction at a large hospital; (3) admission to examinations qualifying to practice.

The running expenses are met by the students' fees, which amount to a little over £1000, the number of students being a little over thirty; a small amount of interest from investments, and the remainder from subscriptions and donations, making a total of nearly £2100 ($10,000) for the annual expenditures, which is certainly not large. It is hoped now to raise a permanent endowment, which is intended for educational and not architectural use, an example that seems to commend itself little to Americans.

The school is installed very modestly, but is carried on with marked earnestness and ability. It is certainly an interesting and important experiment, one which must go far towards settling the vexed question of the feasibility and desirableness of giving women medical training, and how far it is of practical value to them. Indeed, this may be regarded as a crucial experiment, since the school is a very superior one, and if it fails to achieve success it will seriously discredit the whole movement towards the professional education of women.

The school must be admitted to be superior to most if not *all* American medical schools, in that its course of study extends over four years, the students being recommended to take five. The instruction, as far as I could ascertain, is thorough and efficient. It is well known that at London University the women have several times carried off the prizes from the men competitors. Passing the examinations requisite for qualifying is a severe test, which the women, however, stand well, although few of our schools, perhaps, would like to expose their pupils to such proofs.

It is hardly worth while to attempt to describe the instruction, both because my visit was too brief to enable me to form an independent opinion, and because it seems to differ little from the known English standard, which is higher than the American.

The number of women physicians in Great Britain is very small. I have not now the list at hand, but to the best of my recollection it adds up to a couple of dozen only. Those who wish to practice find, I have been informed, abundant occupation. There is here, as in America, an unquestionable demand for female physicians, and under these circumstances it appears but wise to provide thorough education for ladies who are determined to enter the profession.

In conclusion, permit me to add, Mr. Editor, that I believe the just ground to take in regard to this vexed question of medical women is to view the whole as an experiment. It is, too, only fair to add that the success of women has thus far been greater and better deserved than most of us of the other sex had been previously ready to admit to be possible. The most common objection usually made now is that woman has intuition rather than a logical faculty. But is not this too often a formula, a cabala of refuge? Does the average male practitioner always reason out his treatment with severe scientific logic, or does masculine intuition often help him?

It is to be deplored that discussions of this subject are so frequently conducted with strong feelings on both sides, and that there is not more judicial consideration of the *pros* and *cons*. If a gentleman asserts that women are not fitted to become, and cannot become, competent physicians, one cannot avoid the conviction that he who makes the assertion is not fitted to form a sound judgment, for candor compels the admission that we have not yet the basis for a positive and definite decision for either side. Meanwhile ought it not to be remembered that women have achieved more success than was anticipated? Let opportunity, therefore, be given for fair trial, and for a while let judgment be suspended. I am, etc.,

CHARLES SEDGWICK MINOT.

DR. J. J. MASON ON THE CENTRAL NERVOUS SYSTEM OF REPTILES AND BATRACHIANS.

SMITHSONIAN INSTITUTION,
WASHINGTON, D. C., *December* 9, 1882.

MR. EDITOR, — I find in the Boston Medical and Surgical Journal for November 30th a notice of Dr. Mason's work on the Central Nervous System of Reptiles and Batrachians, in which it is suggested that the Smithsonian Institution may have rendered some assistance to the author in bringing out this extensive and elaborate work.

I now beg to say that the only help given by the institution, was in furnishing some of the specimens which constitute the subject of the investigation.

It may be well to place on record the fact that not only were all the photographs made by Dr. Mason's own hands, in addition to his prosecuting the original researches themselves, but that the composition and press-work of the book were executed entirely by himself in his own house, and the artotype plates made under his daily supervision. The book well deserves to be considered as a curiosity in literature, apart from its scientific value, being a specimen of amateur printing and press-work seldom, if ever, surpassed by the most celebrated typographical establishments in the country.

Yours truly, SPENCER F. BAIRD.

◆

MASSACHUSETTS STATE BOARD OF HEALTH.

LAWRENCE, *December* 14, 1882.

MR. EDITOR, — Permit me to remark in relation to the query contained in the closing paragraph of your editorial in the JOURNAL of December 7th concerning the qualifications of John Fallon, Esq., of Lawrence, for the duties of a member of the State Board of Health, Lunacy, and Charity, that Mr. Fallon is a self-made man, of large information upon scientific subjects, a practical chemist of distinguished attainments and wide experience, and a student of social science. He will carry to the duties of the position assigned him those qualities which cannot fail to make him a worthy successor of Mr. Hoadley, to whose place he succeeds.

Mr. Fallon, having retired from active business, has the time as well as the taste and inclination for the service required of him, and he will, unquestionably, become a useful and valued member of the Board of Health, Lunacy, and Charity. C. N. C.

[The "query contained" was a hope expressed. — ED.]

◆

HOSPITAL FOR INCURABLES.

MR. EDITOR, — It is almost superfluous to call to the minds of your readers the fact that among our poor are many who are afflicted with incurable or virtually incurable diseases, which unfit them for work of any nature. They can obtain only temporary entrance into our large hospitals, because the sick who are curable require every bed. These unfortunates, therefore, many of them, have only to struggle on, living as best they may without medical care, unless it be given without fee.

Doubtless every physician in active practice has been embarrassed as to how to dispose of such cases.

In recognition of the urgent need of a refuge for these incurables, a house, to be known as the Hospital for Incurables, has been opened in Brighton. This has been accomplished by means of generous subscriptions and donations from influential men and women of Boston who appreciate the need of such a refuge, and are earnestly interested in its development.

I write to ask the coöperation and interest of the JOURNAL, as well as of all physicians to whose notice this communication may come. The hospital is ready to receive patients. For the present only women and children can be admitted.

I will gladly call and examine candidates who may be in, or be brought into, the city. On Wednesdays, at 10 A. M., I will do the same at the hospital, which is located in Harvard Place, Brighton, opposite Cattle Fair Hotel. Patients who can do so will be expected to pay a nominal fee for board; others will be admitted gratuitously.

It is to be hoped that the institution will constantly receive pecuniary aid in the form of donation or subscription. The list of donors may be seen during the forenoon of week days at Miss Harmon's room (No. 37), Charity Building, Chardon Street, or at my office, 2 to 4 P. M. Yours very truly,

HAMILTON OSGOOD.

235 MARLBOROUGH STREET, *December* 17, 1882.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 9, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Typhoid Fever.
New York	1,206,590	578	200	15.57	21.80	6.23	.86	.86
Philadelphia	846,984	405	128	21.56	11.56	14.08	2.22	2.96
Brooklyn	566,689	240	85	20.41	23.74	8.33	5.83	1.25
Chicago	503,304	187	84	24.46	14.95	10.68	3.74	4.27
Boston	362,535	173	57	23.16	14.92	14.50	2.31	1.73
St. Louis	350,522	109	68	48.60	11.90	27.51	9.17	1.83
Baltimore	332,190	178	67	33.04	6.72	13.44	2.24	1.12
Cincinnati	255,708	107	39	19.61	23.35	.93	2.83	8.41
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	61	17	9.84	18.04	1.64	6.56	—
Pittsburg	156,381	60	16	29.88	15.00	10.00	—	15.00
Buffalo	155,137	54	20	—	—	—	—	—
Milwaukee	115,578	50	29	16.00	18.00	12.00	2.00	2.00
Providence	104,857	47	11	25.54	17.02	2.13	2.13	19.05
New Haven	62,882	21	11	28.56	4.76	4.76	4.76	—
Charleston	49,999	33	11	12.12	9.09	—	—	6.06
Nashville	43,461	17	4	35.28	17.64	5.88	—	—
Lowell	59,485	29	9	31.05	10.34	6.90	3.54	6.90
Worcester	58,295	20	9	15.00	20.00	—	—	10.00
Cambridge	52,740	19	5	5.26	21.04	5.26	—	—
Fall River	49,006	21	4	28.57	4.76	4.76	4.76	—
Lawrence	39,178	12	3	32.32	8.33	32.32	—	—
Lynn	38,284	9	2	11.11	—	—	—	—
Springfield	33,340	15	4	6.66	6.66	—	—	—
Salem	27,598	16	6	12.50	6.25	6.25	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	9	2	22.22	11.11	—	11.11	—
Holyoke	21,851	13	7	23.07	7.69	—	7.69	—
Chelsea	21,785	11	3	9.09	27.27	—	—	—
Taunton	21,213	4	0	25.00	—	—	—	25.00
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	5	0	—	20.00	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	5	2	20.00	40.00	—	—	—
Newburyport	13,537	5	1	20.00	—	—	20.00	—
Fitchburg	12,405	3	0	—	—	—	—	—
Malden	12,017	5	2	20.00	—	—	—	—
Nineteen Massachusetts towns	143,900	42	17	19.04	19.04	7.14	—	—

Deaths reported 2567 (no report from New Orleans): under five years of age 924: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 551, consumption 395, lung diseases 412, diphtheria and croup 244, typhoid fever 72, scarlet fever 68, diarrhœal diseases 41, small-pox 30, malarial fevers 24, whooping-cough 20, measles 21, cerebro-spinal meningitis 19, erysipelas eight, puerperal fever four. From *diarrhœal diseases*, New York 10, Chicago six, Boston five, Cincinnati and Brooklyn four, St. Louis three, Baltimore, Nashville, and Lowell two each, Charleston, Fall River, and Chelsea one each. From *small-pox*, Baltimore 23, Philadelphia four, Chicago, Pittsburg, and Nashville one each. From *malarial fevers*, New York nine, St. Louis five, Brooklyn four, Chicago and Nashville two each, Baltimore and Cincinnati one each. From *whooping-cough*, New York five, Brooklyn four, New Haven three, Philadelphia two, St. Louis, Cincinnati, District of Columbia, Charleston, Lynn, and Chicopee one each. From *measles*, New York 13, Boston and Baltimore two each, Philadelphia, Pittsburg, New Haven, and Peabody one each. From *cerebro-spinal meningitis*, New York five, Holyoke and Chicopee two each, Philadelphia, Chicago, Pittsburg, Providence, Lowell, Worcester, Springfield, Somerville, Brockton, and Woburn one each. From *erysipelas*, New York two, Philadelphia, St. Louis, Cincinnati, Lowell, Salem, and Malden one each. From *puerperal fever*, Chicago, Boston, St. Louis, and Baltimore one each.

One hundred and twenty-six cases of small-pox were reported in Baltimore, Pittsburg eight, Cincinnati four, Nantucket one; diphtheria 58, scarlet fever 25, and typhoid fever 12, in Boston; scarlet fever 16 and diphtheria seven in Milwaukee.

In 36 cities and towns of Massachusetts, with a population of 1,010,390 (population of the State 1,783,086), the total death-rate for the week was 20.63 against 20.31 and 18.81, for the previous two weeks.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending November 25, the death-rate was 24.2. Deaths reported 3919: acute diseases of the respiratory organs (London) 411, measles 120, scarlet fever 110, fever 96, whooping-cough 88, diarrhœa 53, diphtheria 29, small-pox (London and Manchester two each, Newcastle one) five. The death-rates ranged from 14.7 in Bolton to 47.8 in Sunderland; Wolverhampton 19.7; Nottingham 21.8; London 22.5; Manchester 24.2; Bristol 25.8; Liverpool 26.7; Leeds 27.2: Hull 32.2. In Edinburgh 22 2; Glasgow 27.8; Dublin 29.2.

For the week ending November 25, in the Swiss towns, population 494,390, there were 33 deaths from consumption, acute diseases of the respiratory organs —, diarrhœal diseases eight, scarlet fever four, typhoid fever four, diphtheria and croup two, puerperal fever two, whooping-cough one. The death-rates were, at Geneva 9.3; Zurich 10.1; Basle 17.1; Berne 29.9.

The meteorological record for the week ending December 9 in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
December, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 3	30.013	20	34	11	77	70	64	70	NW	NW	NW	12	20	18	T	O	C	—	—
Mon., 4	30.309	18	27	6	55	46	73	58	W	SW	SE	8	6	8	C	F	O	—	—
Tues., 5	30.137	42	52	23	82	41	91	71	SW	SW	SE	8	8	6	F	C	O	—	—
Wed., 6	29.968	46	54	36	80	50	65	65	SW	W	W	19	12	6	O	T	C	—	—
Thurs., 7	29.885	26	48	15	78	88	67	78	SE	NW	W	12	25	27	O	S	C	—	—
Fri., 8	30.179	20	25	14	67	58	70	65	W	SW	W	13	19	16	C	C	C	—	—
Sat., 9	30.287	25	32	15	67	54	77	66	W	W	SW	12	14	5	C	C	O	—	—
Means, the week.	30.111	28						73										17.30	.33

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

Obstetric and Gynæcological Section of the Suffolk District Medical Society. — A meeting will be held at 19 Boylston Place, on Wednesday evening, December 27th, at eight o'clock. The following papers will be read: Dr. J. R. Chadwick, Cases of Congenital and Acquired Stenosis of the Female Genital Tract. Dr. W. A. Dunn, Results in Five Hundred Labor Cases. John B. Swift, *Secretary.*

Suffolk District Medical Society. — There will be a general meeting of the Society on Saturday, December 30th, at 19 Boylston Place, at 7.45 P. M. The following papers will be presented: Histology of the Uterine Myxoma, illustrated by Microscopic Preparations, Dr. H. O. Marcy. A Household Epidemic from Defective Drainage, Dr. H. W. Broughton. Two Cases of Tetanus, with Recovery, Dr. E. Chenery. Supper at nine o'clock. H. C. Haven, *Secretary.*

Books and Pamphlets Received. — Vick's Floral Guide. 1883.

Diseases of the Liver, with and without Jaundice, with the Special Application of Physiological Chemistry to their Diagnosis and Treatment. By George Harley, M. D., F. R. S., etc., etc. Illustrated by Colored Plates and Wood Engravings. Philadelphia: P. Blakiston, Son & Co. 1883.

Three Cases of Stricture of the Urethra cured by Electrolysis after all other Methods of Treatment had Failed. By John Butler, M. D New York. (Reprint.)

A Case of Ovarian Tumor with Rare Complications. By A. P. Dudley, M. D., and H. C. Coe, M. D. (Reprint.)

Fibromata and Cysto-Fibromata of the Ovary. By Harry C. Coe, A. M., M. D. New York. (Reprint.)

Incontinence of Fæces in Children. By George B. Fowler, M. D. New York. (Reprint.)

Transactions of the Minnesota State Medical Society. 1882. St. Paul.

Circulars of Information of the Bureau of Education. No. 2. 1882. Proceedings of the Department of Superintendence of the National Association at its Meeting at Washington, March 21-23, 1882.

Preliminary Report on the Yellow Fever Epidemic of 1882 in the State of Texas. Treasury Department, Marine Hospital Service.

Excision of Cartilage in Nasal Obstruction due to Deviated Septum. By John B. Roberts, M. D. Philadelphia.

Contributions to the Vital Statistics of Australia. By James Jamieson, M. D. Melbourne. (Reprint.)

Biennial Report of the Officers of the Vermont Asylum for the Insane for the two Years ending July 31, 1882.

Medical Colleges. Advance Sheets from Fourth Annual Report Illinois State Board of Health.

Reduplication, or Doubling of the Cardiac Sounds. By James Burr, M. D., L. R. C. S., Edin. Liverpool. (Reprint.)

Nos Rapports avec la Commission de Controle; des Expériences Relations au Microbe de la Pleuro-pneumonie Contagieuse. Par G. Bruylants and G. Verriest, professeurs à l'Université de Louvain.

Analysis of Eight Thousand Cases of Skin Disease. By L. Duncan Bulkley, A. M., M. D. New York. 1882. (Reprint.)

The Balsamics. By Henry M. Field, M. D. Read before the New Hampshire Medical Society, June 20, 1882.

Annual Report of the National Board of Health for the Year 1882.

Contribution to Surgical Gynæcology. By Edward W. Jenks, M. D., LL. D. Chicago, Ill. (Reprint.)

Studies from the Pathological Laboratory of the University of Pennsylvania. No. X. The Pathogenesis of Secondary Tumors. By Henry Wile, A. B., M. D. Rochester, N. Y. (Reprint.)

Some Comments and Discussion on the Paper "The Ætiology of Tumors." By H. F. Formad, B. M., M. D. (Reprint.)

The Bacillus Tuberculosis and Some Anatomical Points which suggest the Refutation of its Ætiological Relation with Tuberculosis. By H. F. Formad, B. M., M. D. (Reprint.)

Mittheilungen aus der Ophthalmiatrischen Klinik in Tübingen Herausgegeben. Von Dr. Albrecht Nagel. Erster Band. Tübingen. 1882. Verlag der H. Lauppschen Buchhandlung.

Pestilentia in Nummis. Geschichte der Grossen Volkskrankheiten in Numismatischen Documenten. Ein Beitrag zur Geschichte der Medicin und der Cultur. Von Dr. L. Pfeiffer und C. Ruland mit zwei Tafeln Abbildungen in Lichtdruck. Tübingen. 1882. Verlag der H. Lauppschen Buchhandlung.

Lectures.

CLINICAL LECTURE.

GIVEN AT THE HOSPITAL, NOVEMBER 25, 1882.

BY MORRIS LONGSTRETH, M. D.,

One of the Attending Physicians to the Pennsylvania Hospital.

AUTOPSY IN A CASE OF ACUTE MENINGITIS WITH DISEASED HEART. REMARKS ON DIAGNOSIS.

Gentlemen, — Before bringing any patients into the amphitheatre, I wish to invite your attention to some pathological specimens obtained from two cases that have died in the wards since the last clinic day.

The post-mortem examination of the first patient gave us the diseased organs upon the table, which I will demonstrate to you after briefly recounting the clinical history of the case. His name was John T., his probable age about thirty-five years. The people who brought him into the hospital went away without giving a statement as to his illness, and the patient was so prostrated and partly delirious he could give very little account of himself; we had almost no history in fact. It was ascertained that he had been sick with a fever for several days, and had been delirious for one day. When admitted his appearance was decidedly typhoid; his temperature was 101.5° F. on the morning he was examined. It was found that he had a congestion of the base of the right lung posteriorly, and a few dry râles were heard in this position. Upon examining his chest anteriorly a very striking state of affairs was found. There was a strong heaving impulse of the chest wall in the left mammary region, corresponding with each apex beat of the heart, which was felt in two intercostal spaces, in a position about one and one half inches outside of the line of the nipple, and two inches below. The area of cardiac dullness was also very decidedly increased. There was a harsh systolic endocardial murmur, extending beyond the apex, but over the aortic cartilage no murmur was heard. The vessels of the neck were observed to be pulsating strongly. The surface of the body was carefully examined for any eruption, but as he had been wearing a new red flannel shirt the skin had been deeply stained by it, but as far as could be made out through this redness of the skin no eruption was visible. He had no diarrhœa, his bowels, indeed, were constipated, and when moved the evacuations were not of the ordinary typhoid appearance, but were darker colored. He was treated symptomatically; dry cups were applied to the chest followed by turpentine stupes, and internally dilute mineral acids were given. On the morning after admission the notes further say that he was very delirious, flighty, and bled at the nose. There was more hebetude, trembling of the hands, which moved about the bedclothes; he was talking incoherently, and quite restless. The tongue was very dry, coated, and cracked; he was quite deaf. With all this there was now noted to be some tenderness at the back of the neck, and he cried out when an attempt was made to move the head, or to make him sit up in bed. There was, however, no marked retraction of the head, and he was able to move it from side to side. The urine had to be drawn by the catheter, and it was found to contain a small amount of albumen. As the delirium increased his pulse became more rapid, but not dicrotic. During the next two days the evidences of typhoid fever were less marked; the coated dry tongue remained, but no eruption made its appearance; no tenderness of abdomen was detected, no distention, no diarrhœa, in fact he was constipated, and required an enema, which produced an evacuation of the bowels, which was of a dark-brown color, very different from the characteristics of the discharges in typhoid. At the same time his head symptoms increased; he was much more delirious and restless, tossing about; he also made efforts to leave his bed, and even succeeded one night in doing so. Without continuing this history in detail I will say in brief that he became gradually weaker, the fever continued, the delirium deepened into a coma, in which he died on the fifth day after admission.

Here is the temperature record: —

	A. M.	P. M.
Nov. 16,	101.5° F.	102.5° F.
17,	100° F.	101° F.
18,	102.5° F.	100° F.
19,	101° F.	102° F.
20,	102° F.	102° F.
21,	102° F.	103.5° F.

Notice that on the third morning the temperature was higher by a degree and a half than on the night preceding, and although it was slightly lower on the same evening, it continued at the same point night and morning until the final rise just before death.

I was not present at the post-mortem examination, but the resident physician, Dr. L. Artis, removed the organs, which I have since inspected. The physical examination of the chest showed dullness at the lower part of the right lung posteriorly, and you see the deeper congestion of this part of the corresponding lung as compared with the anterior part. I make an incision, and you notice that although the surface is rather pale, in the interior of the organ we have it engorged with blood. Squeezing the tissue you observe this frothy serum exuding, which is also deeply blood-stained. A certain amount of air is retained in the lung, though not the full amount, certainly less than during life. The upper part of the lung on section is pale, and of the normal appearance, in marked contrast with the lower portion, which is deeply congested, although there is no solidification, there is only congestion from hypostasis, not pneumonia. On the left side we find also considerable hypostatic congestion, though less than in the right lung; here in the upper part we have again the same contrast between the anterior and the posterior part.

Now with regard to the heart note: "Extended impulse felt over several intercostal spaces; heaving of chest; increased transverse percussion dullness; old valvular murmur, systolic in time, heard at the apex." How are these notes explained? Here you see, in the various alterations I will exhibit to you, a cause of the heaving chest wall. An immensely hypertrophied heart (weighing thirty-four ounces). A heart of this size would extend beyond the nipple line, and give us the forcible heaving impulse by its apex beat. I will not open the heart by the usual incision, because I wish to preserve the adherent pericardium, but by passing my fingers through the tricuspid valves, and indicating the position of the septum ventriculorum by my thumb placed externally, you can see that the principal enlargement exists upon the left side, the right being very little changed. When we lift up the heart you notice that the two surfaces of the pericardium are firmly adherent. Of this old pericarditis we had no history; it probably originated in the same attack of rheumatic inflammation which affected the valves, the serous investment of the heart being inflamed externally as well as internally. As a result of this rheumatic pericarditis there has been adhesion and complete obliteration of the pericardial space, and the heart is fastened to the inner surface of the chest. This fully explains the heaving or dimpling of the chest wall during life synchronously with the motions of the heart. Passing my fingers down through the aortic orifice I find the valves stiffened by calcareous deposits in the leaflets, but the valves are probably competent; there is no obvious loss of substance. Upon trying the hydrostatic test, however, I find that the water poured into the aorta leaks through into the ventricle, but I do not place much reliance upon this test under these conditions because I am not able to hold the heart in proper position. So far as I can judge from the appearances there could not have been much incompetence of the valves, and this is confirmed by what was noticed during life; there was no aortic murmur. The cavity of the left ventricle is increased, and while the hypertrophy undoubtedly predominates there is also dilatation; the mitral orifice instead of only admitting two fingers easily admits three. The leaflets here are also thickened, calcareous, and defective. Here is the explanation of the mitral systolic murmur; this thickened, incompetent valve permitted regurgitation, and with this amount and character of deposit the murmur was apt to be a harsh one.

Let us now turn to the brain. The dura mater, although its vessels are less full of blood than they were at the time of the autopsy, is still seen to be congested. It is tightly adherent to the brain along the line of the longitudinal sinus, but this is old, and has nothing to do with the present trouble, at least directly. This, however, as you know, is the point of entrance of the veins from the brain into the longitudinal sinus, and obstruction here leads to interruption in the flow of the blood from the brain. Upon the convexity of the hemispheres we find deep congestion; the membranes are dry; there is no excessive moisture here or at the base of the brain, and no increase of subarachnoid effusion; no lymph. It is only at the convexity that we have any condition of the brain that will at all account for the nervous symptoms during life, and these conditions were only in the beginning stage; there is only injection, there has been no subarachnoid effusion nor throwing out of lymph as yet, or if any is present it is barely sufficient to permit of scraping up by the scalpel, it is not at all evident on inspection.

You see the difficulties attending the diagnosis in such a case. The man could give no account of himself; his friends gave no history of any previous illness. At first, from the general appearance of the patient, his symptoms resembling those of typhoid fever, it was thought that it might be a case of that kind, but later this idea was abandoned. The question then came up whether these nervous symptoms were due to disorder in the chest, that is, symptomatic delirium, or due to meningitis, but the pulse turned the decision in favor of the latter, and the temperature record also sustained the view of early meningitis. As to its character, whether there was a blood poison bringing about this meningitis or not we were unable to decide, and are still unable to decide now that the results of the post-mortem examination are before us. You see that the question turned upon symptomatic delirium or meningitis, for you know that in many disorders of the chest, where the endocardium is inflamed, but especially where the pericardium is involved, you are very apt to have brain disorder. It is therefore very important to remember this in the diagnosis of supposed cerebral disease. Here it was very difficult to decide. The autopsy shows that although there was disorder in the chest it was not enough or of a character to cause the cerebral symptoms; we find, however, that there was really meningitis. That he died so early in the affection is peculiar, but it is reasonable to suppose that the heart, tied down by pericardial adhesion and diseased in every way, would be unable to bear the additional strain put upon it by the fever process. Notice the crippled valves, notice the immense hypertrophy, and the universal pericardial adhesions; is it a wonder that the heart failed when the fever process fairly set in?

BILATERAL EXTRAVASATION OF BLOOD ON THE BRAIN FROM MENINGEAL HÆMORRHAGE, WITHOUT PARALYSIS.

Here is another case of even more interest; it is rather an exceptional than a typical one, however, but the exceptions are exceedingly valuable sometimes. This man was brought in by policemen on the 21st inst., and died in thirty-six hours. The statement made by those accompanying him was that he was known as a drinking man, and that he had fallen in a fit on the street; it had not been observed whether he was intoxicated or not, but his breath did not smell of liquor. We also were told that he was subject to epileptic convulsions. When he came in he was very dull and stupid, he could move his limbs, but paid no attention to questions; the respirations were full and heavy, but not stertorous. Instead of being comatose, he looked much more like a man under the influence of alcohol. His temperature was 101° F., his pulse was 100, full and regular, and not very tense. So far as we could make out there was no appearance of paralysis of face or extremities. There was no scalp wound, but there was some blood in his left ear, which had oozed from an abrasion on his face produced by the fall. His pupils were irregular, — the right was contracted, the left rather dilated. This still continued after death, but the difference was not very great. There was also observed a very sluggish reaction to light in the pupils, though both were mobile. The urine had to be drawn by the catheter; it contained neither albumen nor alcohol. The bowels were moved by an enema. After he had been in the hospital for a short time he revived, and was very restless; it was with difficulty that he was kept in bed; he was actively delirious; he talked incoherently, and the appearance of intoxication became even more marked. He had to be tied in bed, finally, like a case of delirium tremens. The next morning he became comatose, and died later in the day.

Here is another very imperfect history. A man falls in the street, has symptoms of concussion of the brain, and dies in thirty-six hours. I need not detail the treatment, which was merely symptomatic. Let us examine the specimens: Here is the brain. Over the most prominent portion of the left middle lobe, in the middle fossa outside the dura mater, we find a considerable amount of effused blood, deeply staining the tissues around. This blood came from a fracture of the skull, which is very thin. Upon the right side of the brain there is a hæmorrhage in and from the brain tissue; it has torn up, destroyed, and compressed the right middle lobe. The blood on this side is within the dura mater, but the corresponding areas of brain are involved, on the one side compressed, on the other lacerated as well as compressed. It does not extend to the ventricle. Here you see the fracture of the left side and base of the skull. The cerebral hæmorrhage must have caused the man to fall, and striking his head the thin skull was fractured at the seat of the blow — the side opposite to that of the previous cerebral hæmorrhage.

This is a very unusual case. It was one of apoplexy, but the pulse was 100 to the minute, and not of high tension; the face was not notably flushed, nor the superficial arteries prominent; there was no stertorous respiration early in the attack, and no hemiplegia, — in short, none of the usual characteristics of apoplectic convulsions, nor indeed of hæmatoma. Why was there no paralysis? You will find that in a certain number of cases of escape of blood upon both sides of the brain, when outside the corpora striata, and especially where it is meningeal or peripheral, that there will not be any paralysis during life. Why this is so I cannot positively state, but think that it is because the pressure upon both sides is evenly balanced. Where one side is alone pressed upon, the hemispheres are unequally affected, and paralysis occurs, usually upon the opposite side of the body; where the pressure is bilateral both hemispheres are affected alike and balance each other. Whether the explanation is satisfactory or not, the fact is so. You see that in this case there was pressure from hæmorrhage upon both sides without disturbance of motion; the man could move his limbs, and even had to be tied in bed to prevent his escaping.

Now on cutting into the brain at the level of the corpus callosum you will be enabled to examine the condition of the ganglia and ventricles. As it is important sometimes to be able to replace the parts in order to study the relations of any abnormality, you will find it best to make your section of the hemispheres in this manner: with a sharp knife having a rather large blade a horizontal cut is made on the inner surface just above the corpus callosum, running the whole length of the hemisphere, but not carried entirely through to the external aspect; here a small part of tissue is left to act as a hinge on throwing back the upper section. Now, repeated incisions may be made, and the brain spread freely open, and yet the parts can all be replaced without confusion or mistake. By this method you can get the same amount of exposure, without disturbing the relations. As the ventricles are now exposed, you observe in the left lateral ventricle some bloody fluid, but there is no marked distention, and no changes in the corpus striatum or optic thalamus on this side; the other side is perfectly normal. Hæmorrhage into the corpus striatum must cause hemiplegia, but the hæmorrhage just outside, as it was here, does not cause hemiplegia, and does not often give paralysis. This case, therefore, though very exceptional, is not without its lesson.

In making the diagnosis between apoplexy and alcoholism, I laid stress upon the facts that there was no odor of alcohol in the breath, and that the urine did not contain alcohol. I will now show a practical method of testing urine for alcohol, devised by Dr. Woodbury, formerly a resident physician in this institution. The test is simple, easily made, and accurate enough for ordinary purposes. It is a modification of Anstie's test. About a drachm of white sulphuric acid is poured into a test tube, and about twice the quantity of the suspected urine is then added so as to overlay the acid. Then a clear crystal of bi-chromate of potassium is dropped into the test tube, and its solution favored by rotating the tube, thus mixing the liquids. The presence of free alcohol will be demonstrated by the oxidation of the chromium, producing an emerald green color after the reaction is completed. If there is no alcohol, or if very small traces only are present, the green color, if it appear at all, will not be permanent, but the fluid will have a permanent port wine color. Dr. Woodbury has found that so small a quantity as three parts in a thousand of alcohol are readily detected by this test. Of course, if the reaction is obtained, the results can be confirmed by distillation of the remainder of the urine, if enough can be had for the purpose.

SCIATIC RHEUMATISM. REMARKS ON DIAGNOSIS AND TREATMENT.

The case now brought before you is one of sciatic rheumatism. He came into the ward in a very poor condition, but has since greatly improved. I bring him now to your notice, although the symptoms have almost entirely disappeared, to discuss with you its relations to other diseases for which this is often mistaken.

His history is as follows: T. M., about forty-one years of age, works very hard in a foundry, where he is much exposed to heat and cold. Four days before admission, on the 14th of November, he gave himself a holiday, and stood about in the cold on the street corners He possibly had been indulging in some strong drink, but he says that he had not been sweating before he was standing in the cold. The next day he also remained away from his work and repeated the exposure. In the evening he was seized with a pain in the left hip-joint; and in describing this pain he located it principally at the great trochanter running through to the inner side of the thigh, but not posteriorly. The next day he could not go to work; the pain now extended down the thigh to the knee, but there was no swelling of this joint. Warm applications relieved the pain in the knee, but not in the hip, which remained constant until he was admitted, keeping him from sleeping at night or resting in the day. When we saw him first, he was suffering greatly. The pains extended down the front of the thigh, which was swollen, and the hip was very tender to the touch. The urine was small in quantity, acid, concentrated, and contained a trace of albumen. The temperature was 99.5° F., therefore only a slight febrile movement, probably no more than might be accounted for by the painful condition of the limb, and his restlessness. He had no more fever after the day of admission.

Let us indicate precisely where this pain was. He shows us that the pain was principally here, — placing his hand on the great trochanter and the outer side of the joint, — and that it passed through to the inner side of the thigh, and made all this group of muscles (extensors) extremely tender to the touch. There was no pain nor tenderness at the back.

Here we have a case of muscular rheumatism in nearly the same region as ordinary sciatic rheumatism; for notice that although he had pains extending down to the knee, they were not in the locality of those of sciatica. It is important in such cases not to accept ready-made diagnoses, which the patient will be apt to give, but to examine and judge of the case for yourself in order to get good results. The pain is not in the course of the sciatic nerve, but is principally in the muscles; in reality it is a muscular rheumatism. It is not articular rheumatism, however, any more than it is sciatica. All the cases of sciatica I have seen in the early stages, however, have some pain in the origin of the muscles, but it is not confined to them.

For treatment, he had hot applications of fluid extract of hamamelis, but the pain was so great that he required repeated injections of atropia and morphia. Internally he had iodide of potassium, in ten-grain doses, four times a day. Under this he has, as you see, become much better.

In connection with this case I will, in conclusion, make a few remarks upon the relationship of ordinary rheumatism, whether muscular, articular, or of the sciatic nerve, and that occurring in connection with changes in the spinal cord or in the vertebræ, with especial reference to a point in the treatment. This is connected with a little piece of history of the Pennsylvania Hospital which is worthy of note. In 1831 Dr. J. K. Mitchell, who was one of the attending physicians, broached a theory of rheumatism, suggested by a case under his care. He asserted that many cases of articular rheumatism were of spinal origin. The case which first brought this into his mind was one of Pott's disease of the spine, vertebral caries, in which there occurred an acute inflammation of the knee-joint, an inflammation in every respect resembling that of acute articular rheumatism. By way of experiment, he applied cups to the diseased spine, with the surprising result that the articular inflammation of the knee almost immediately subsided. Now, I do not mean to say that this view which he entertained was correct that many cases of articular rheumatism are of spinal origin, but it appears to warrant the statement that cases of articular inflammation may have a nervous origin. Those cases which have been brought to our notice by Charcot, of Paris, and which he denotes "spinal arthropathics," are simply inflammations of joints of spinal origin; exactly the same as those recognized long before by Dr. Mitchell, and which he believed to be caused by disturbed innervation. You may call it trophir, or call it what you will, the fact is, that the spinal disorder caused an inflammation (in every respect like articular rheumatism) in the knee-joint, which by the treatment, cupping the spine, was promptly relieved. Acting upon this theory, Dr. Mitchell ordered that every case of acute articular rheumatism which came into his ward of the hospital should have wet cups placed along the spine, as near as possible to the place where the nerves issued which were distributed to the inflamed joints. It is another surprising fact that many cases were greatly relieved by this treatment, and the articular inflammation rapidly subsided. In a case of sciatica, which is more apt to have a spinal origin than joint rheumatism, cups could be placed in the lumbar region, and you will find that many cases of sciatic inflammation will be relieved in a very remarkable manner by three or four dry cups placed in this region. I recall a case of a very large woman suffering with sciatica in my ward last year, who came in helpless with pain; she could not even turn in bed. I ordered the cups to be applied, but as she weighed over two hundred pounds the nurse could not turn her over. I saw her the next day, still acutely suffering. By exerting the entire available force of the ward, they succeeded in applying the cups before my next visit, when I found her enjoying complete relief from pain. Before this she had had several attacks, which in spite of treatment usually lasted several weeks; whereas, complete and permanent relief was afforded almost immediately by the method which we adopted.

Original Articles.

THE NEW LENOX MALARIA CASE.

BY J. F. A. ADAMS, M. D.

THE trial of the Smith Paper Company of Lee, Mass., for maintaining a nuisance at New Lenox, commonly known as the "Malaria Case," took place before the Superior Court at Pittsfield, beginning October 10, 1882, and ending November 1st, with a verdict for the defendants.

The indictment, which was presented by the grand jury July 10, 1882, recited that the Smith Paper Company possessed and have maintained a certain dam on the Housatonic River, by means of which the water has been dammed back and flowed up over the surface of a large tract of land adjoining the river in the towns of Lenox and Lee, for a distance of four miles in length, and one mile in width. By such maintenance of the dam and the use of the water the channel of the river and the adjacent lands have been alternately flowed and drained, causing a deposit of mud and various organic substances in the channel, and rendering the adjacent lands marshy and covered with decaying vegetation and other filth, the source of noisome stenches and unwholesome exhalations, which have poisoned the air and injuriously affected the health of persons living or passing in that vicinity.

The case was tried before Judge Brigham; the Commonwealth was represented by District-Attorney A. J. Waterman, assisted by Hon. Justin Dewey, of Great Barrington, Thomas Post, of Lenox, and E. M. Wood, of Pittsfield. The defense was conducted by Messrs. Pingree and Barker, of Pittsfield, assisted by ex-Judge Soule, of Boston, and E. D. Slocum, of Pittsfield. The opening argument for the Commonwealth was made by the District Attorney, and that for the defense by J. M. Barker, Esq.

Seventy-two witnesses were called by the Commonwealth, and sixty by the defense.

The testimony for the Commonwealth may be summarized as follows: —

In 1870 the dam of the Smith Paper Company, near Lenox depot, was raised three feet, a dam four feet high having previously existed at the same place. The effect of this was to greatly enlarge the reservoir by overflowing the meadows on either side of the river, the water being set back for a distance of four miles in a direct line. In the upper half of this distance the water was not ordinarily raised above the banks of the river, but in the lower half the banks were submerged, and the water spread out irregularly to a width of about a quarter of a mile on the average. This surface was diversified with islands and tongues of land, varying in shape and extent with the height of the water. When this was flowing over the dam a considerable pond appeared, with marshy borders, but when the water level was one or two feet below the crest of the dam large tracts of muddy bottom were exposed, all vegetation being killed, and nothing remaining but the decaying skeletons of trees and bushes. With the daily variations in the height of water portions of this muddy bottom were alternately covered with water and exposed to the sun and air. The extent of these fluctuations depended upon the volume of water in the river, being very large in times of drought and low water, as during the summer and fall of 1880, and less in more rainy seasons, as those of 1881 and 1882. Outside of the water line the land was saturated with water, and would produce only coarse marsh grass in place of the valuable hay and other crops which had formerly grown there. There were also numerous depressions in the surface of the meadow, the vestiges of former floods or changes in the channel of the river. Some of these were connected with the river and called "coves," others were detached and called "pockets." The pockets, which formerly drained off readily after freshets, and produced a good quality of grass, were converted, by the raising of the water level, into stagnant pools, where water stood most of the summer, killing the grass, and causing putrefaction and a nauseous and offensive smell.

This valley is shut in on the east by the Hoosac range of mountains, which rise abruptly from the meadow to the height of five hundred feet or more. On the west the ground rises more gradually toward the village of Lenox, which is two miles away, and two hundred feet higher than the valley.

In the summer of 1878 intermittent fever began to prevail in the vicinity of this reservoir, the first cases appearing close to the river, on the east side, at the foot of the mountains, and has continued to prevail until the present time, being limited to the valley in which the reservoir is situated and to the hill-sides around it to a distance of a mile. This region has a population of about eight hundred souls, of which number three hundred and fifty-three were attacked with intermittent fever up to October 1, 1882. The first cases were close to the river, and chiefly on the east side, and thence new cases appeared further and further away. Up to 1880 cases had appeared in every one of the twenty houses on the east side of the river between the dam and the Pittsfield line. In some houses as many as six cases have occurred. No cases have occurred in the higher parts of Lenox. Of the contiguous towns on the south, no cases have occurred in Stockbridge, with a single exception, in 1880, and but very few in Lee. In Pittsfield, which adjoins Lenox on the north, a few cases have appeared each year since 1880, chiefly in the vicinity of a millpond east of the village.

Of the witnesses living in the malarial district forty-six had themselves had chills and fever. Of the physicians called by the Commonwealth, Drs. Holcombe, of Lee, Roberts and Wentworth, of Pittsfield, had treated cases of intermittent fever in the same locality.

The testimony of experts called by the Commonwealth, though given in some cases at great length, may be briefly summed up as follows:—

Dr. C. C. Holcombe, of Lee, after describing the cases he had treated, and the condition of the locality, was asked what cause he could discover for the disease. He replied, "The conditions that exist about the defendants' dam, as I have described it, are sufficient cause for the cases."

On being asked what those conditions are, he answered, "I mean the conditions which could be removed by thorough drainage."

Dr. J. F. A. Adams, of Pittsfield, said, "My belief is that the prevalence of the fever is due to the swampy nature of the locality. This affords a soil favorable for the development of malaria, but this development would not take place except for the epidemic influence which comes from without." He described the progress of the epidemic northward through the western portions of Connecticut and Massachusetts, appearing first and prevailing most violently in the vicinity of swampy places. He did not accept the germ theory because the existence of a specific germ is not yet proved, but thought it more in accordance with the known facts than any other theory. He believed the malarial poison was exhaled from the swampy land on the margin of the reservoir, and from the muddy bottom when exposed to the sun and air. He considered the condition of things in this locality peculiarly favorable to the development of malaria, and similar to those which have always and everywhere been found to conduce to the prevalence of malarial fevers. He believed that if the dam had not been there the cases of this disease in that neighborhood would have been very few, and that the removal of the dam would greatly diminish the number and severity of such cases.

Dr. W. H. Wentworth, of Pittsfield, said, "I do see a sufficient cause for the disease. It was the low, swampy condition of that valley."

Dr. O. S. Roberts, of Pittsfield, said, "I think I discover the cause in the shallow water, which exposes a large extent of vegetable matter to the atmosphere the greater portion of every day."

Dr. George M. Beard, of Millport, Clay County, N. Y. "I do discover an adequate cause for the malaria at New Lenox, From my experience I have not the least doubt that this is a hot-bed for promoting, if not generating, malaria." In support of his opinion he said that he had been appointed by the New York State Board of Health to examine an abandoned portion of the Chemung Canal, which had become partly filled up and converted into a marsh. Malaria appeared in the vicinity in 1877, and during the two following years nearly every person in that neighborhood had chills and fever. Drainage was begun in 1881 and completed in 1882, a ditch being dug in the centre of the canal, with the result that, in 1882, only forty-one cases have occurred in that vicinity, only four of these being under the care of physicians.

Dr. John T. Wheeler, of Chatham, N. Y., said: "I think the cause lies in the marsh, and the conditions affecting it." He believed the condition would be improved by drainage, and cited a case within his own knowledge at Chatham, where the drainage of a shallow pond and marsh in 1876 and 1877 was followed by a great diminution in the cases of chills and fever. The first year after drainage the number of cases diminished one half, and now there is not one tenth the former number.

Dr. William Deming, of Hartford, Conn., testified that he lived in Lenox from 1858 to 1867, and never saw or heard of any cases of chills and fever there, except imported ones. He said that he could see conditions favorable to the development of malaria in that valley.

Dr. Charles A. Lindsley, Professor in Medical Department of Yale College, and member of State Board of Health of Connecticut, said, in answer to various questions: "I discover there the conditions usually prevailing where malarial fever prevails. I don't think I ever saw a pond so favorable for the development of malaria in so marked a degree. For a remedy, I would not obstruct the water by a dam. Intermittent fever has always prevailed most extensively by marshes, but all marshes do not produce it. The primary cause is an unknown poison, which comes in an unknown way, and is only known by its effects. The reason why one swamp is healthy and another not is that the poison exists in one and not the other. Such a dam should never have been erected in such a place as the New Lenox valley."

Dr. Horace S. Fuller, of Hartford, Conn., chairman of Hartford Board of Health, said: "I should say, assuming the facts stated in the question, that the condition here is a sufficient cause for the disease. I have no doubt that this pond would contribute to the prevalence and intensity of the disease."

Dr. Charles F. Folsom, of Boston, member of the National Board of Health, and former Secretary of Massachusetts State Board of Health, said: "I find an adequate cause for the existence of fever and ague. All the known causes for its existence are there." In regard to the "unknown factor," he said that he does not at present accept the germ theory. He has made investigations, but the result has been negative. He believed drainage would relieve this locality, but that effectual drainage would be impossible with the dam as it is. As long as the dam is maintained at its present height, he believed the condition will remain the same as now.

Dr. A. W. Barrows, of Hartford, Conn., said: "The condition and exposure of the ground I consider a cause for the prevalence of the disease. Malaria as a poison has found lodgment there. The conditions here are by the medical profession recognized as developing malaria. In this instance I have no doubt the conditions increase the intensity, prevalence, and persistency of the disease."

Dr. Chauncey M. Field, of Plainfield, N. J.: "I found causes which in my opinion are sufficient for the disease. These were the changes in the atmosphere produced by the conditions found there." He cited a case at Bound Brook, N. J., where he has lived till within a few months. A railroad built in 1874 dammed up a pond of seventy-five acres, converting the adjacent lands into a morass. The people around it were attacked with chills and fever. The dam was removed in 1880, and the pond drained by ditching. The following year the number of cases greatly diminished. In 1881 another pond, a mile away, was also drained with a similar result, as regards chills and fever in its vicinity.

Col. George E. Waring, of Newport, R. I., Sanitary Engineer and Engineer of Land Drainage: "I discover an adequate cause for the excessive prevalence of malarial fever. I am in accord with the physicians as to the influence of the exposed bottom in producing malaria. I believe, in addition, that the raising of the water level in the neighborhood, saturating the soil near the surface, impeding the outflow of drains and of tributary streams, is an important factor in producing the disease." For remedies, he mentioned two: —

(1.) To excavate the entire soil, so as to make a reservoir with steep banks, and prevent the exposure of the bottom.

(2.) The *simple* remedy — the removal of the dam followed by proper drainage. If the dam were removed, he believed the effect of freshets would be cleansing.

Gen. E. L. Viele, of New York, Consulting Engineer: "There is no doubt in my mind that the sole cause of the disease is the condition of things existing by reason of this dam. The former swamp might have induced cases of fever and ague, but would not have created an epidemic." From his own investigations he was satisfied that the germ theory is correct. The dam saturated large areas of soil, causing decay of vegetation, and exposing decaying matter to the solar rays. In the beds so created the seeds of malarial diseases flourished.

The Defense. — The defendants brought witnesses to show that the reservoir and its vicinity were swampy before the dam was raised in 1870; that a dam of some sort had existed since the first settlement of the country; that the dam rests upon a ledge of rocks which would prevent the complete drainage of the valley if the dam were removed; that the river is subject to semi-annual freshets which would promote a swampy condition, however well drained it might be; that the fluctuations of level are due more to the dams above, holding back the water, than to the Smith Paper Company's dam; that there are other swamps in Lenox which are not malarious, and that malaria prevails irrespective of local conditions. A number of witnesses testified that they had not observed any bad smells. The existence of intermittent fever was admitted by the defense, but not attributed to the dam. On the contrary it was asserted that the dam maintained the water at a more even level than would exist without it, and was therefore a positive benefit, by keeping the bottom more constantly covered with water. The defendants employed an engineer to make a survey and map of the reservoir, from which it appeared that its present area is two hundred and eighty acres, and that, before the dam was raised, it was one hundred acres; that the depth of water above and near the dam is two and one half to five feet when the dam is full; that the depth of mud in the same locality is twelve to fourteen feet; that the distance from this dam to Van Sickler's dam, the next above, is six and one half miles by the map, and thirteen and one half by the river, with a fall between them of twelve feet, and that the area of the "pockets" between the dam and the Pittsfield line is twenty-five acres.

To all of the experts called by the defense the three following questions were put: —

Question I. "Assuming that the dam of the defendants is situated across the Housatonic River in Lee and Lenox; that it is built upon a ledge of rock which crosses the river about six and one half feet below the top level of the dam; that this dam flows about two hundred and eighty acres of land, a large portion of which was originally swampy, with a muck bottom in many places of from ten to thirty feet in depth; that this dam has been used for the last twelve years for supplying water power, the water not having been drawn down more than twenty-six and one half inches below the crest of the dam, and usually remaining in it at a height of from six to fourteen inches below the crest; that for five years before, there had been in the same location a dam similarly operated, but two feet less in height; that for many years before that time a dam similarly operated had been in the same location, but was about four feet less in height; that prior to 1877 no cases of malarial disease had appeared among the inhabitants residing on the roads nearest to the pond; that, commencing in 1877 or 1878 and continuing to the present time, malarial disease has prevailed to a considerable extent among the inhabitants dwelling around the pond, affecting those residing near and at a distance of a mile or more: Is the appearance or prevalence of the disease, in your opinion, caused by the existence and use of the dam as described?

Each of the seventeen experts called by the defense answered this question in the negative.

Question II. "Would the removal of the dam, leaving a large extent of low and alluvial land covered by freshets, and one hundred acres of marsh uncovered every day, which is kept in a constantly wet condition, remove the disease?"

Each answered this in the negative.

Question III. "If the natural state is as last described, would malarial fevers have prevailed as extensively if the dam had never been erected?"

Each answered this in the affirmative. The additional testimony of the experts may be briefly stated as follows: —

Dr. Francis Bacon, of New Haven, Conn., does not adopt any theory of malaria. "On the germ theory, the removal of the dam would be a disastrous experiment. There are no conditions for the development of malaria stated definitely by authors, the conditions usually described being everywhere present in a greater or less degree. This epidemic is an invasion from without. The first cases usually appear along water-courses, but the disease soon spreads to higher lands. Malarial fevers are more common on low lands, as are also consumption and other diseases. There are some striking instances of the prevalence of malarial fevers near bodies of water, but this rule has been stated too strongly. I have seen many instances of the wide spread of malarial fevers in conditions noticeably the contrary of wet and marshy." For a remedy, in this case, he would first get rid of the outlying swamps, by drainage, and next prevent the contamination by sewage of the stream above. When asked to name a first-class modern authority who does not in substance say that malarial fevers chiefly prevail in marshy localities, he mentioned Ferguson (who said they are most common in a marsh which has dried up), and Oldham (who attributes them to the effect upon the system of heat and chill).

Dr. F. K. Paddock, of Pittsfield, Mass., testified to the marshy condition of "Wood's Pond," a portion of the reservoir near the dam, before the dam was raised. He said the valley is the natural basin for a very large water-shed, so that freshets produce an extensive overflow. He did not believe the malarial condition could be relieved by drainage, but thought the disease would subside of itself.

Dr. William D. Breck, of Springfield, Mass., testified that in Springfield, the water shops pond has stood for fifty years. About twenty years ago the dam was raised and the pond enlarged, so as to be from one sixteenth to three quarters of a mile in width, and three or four miles in length. This is drawn off in summer, exposing a large amount of vegetable material to decomposition. Up to the present year not a case of intermittent fever has occurred, he said, within three quarters of a mile of this pond. In the vicinity of Springfield, he said, the disease prevails on high as well as low land. It has prevailed most severely at West Springfield. Everybody in a certain section there had chills and fever three years ago. There has been no alteration of any kind, and there is scarcely a case there now.

Dr. Lyman M. Tuttle, of Holyoke, Mass., said that in Holyoke the water supply is taken from a pond which has been at various times raised six feet. Two years ago it was raised so as to flow one hundred acres. Last year sixty acres of this was bare; this year twenty-five acres The worst cases of chills and fever were in 1877 and 1878. Since then they have been gradually decreasing, and last year there were very few cases. He has had as many cases on high as on low ground.

Dr. Henry M. Van Devier, of Somerville, N. J., lives four and one quarter miles east of Bound Brook, and knows of the prevalence of intermittent fever there both this year and last. Besides the drainage of the ponds described by Dr. Field, much has been done in the way of local sanitation. A fire in Bound Brook a year ago destroyed the worst part of the town.

Dr. Grove H. Wilson, of Meriden, Conn., member Connecticut State Board of Health: "Intermittent fever first appeared in Meriden in 1865. Cases occurred on high ground, and also on a dry, broad, sandy plain at South Meriden in the vicinity of a dam. There were four cases in 1865, thirty-eight in 1866, and from three hundred to four hundred in 1867. It has prevailed in all parts of the town; is now less prevalent. Typhoid fever disappeared from 1868 to 1878. Since then it is returning, the cases beginning as intermittent, and running into typhoid. I can't see that malaria has been any more prevalent on low than on high ground. The sum of my testimony is, that malaria migrates under a law unknown to me."

Dr. Rufus W. Griswold, Rocky Hill, Conn., stated that the village of Rocky Hill is on a bluff forty feet above the Connecticut River. Out of a population of 1100, fully one half have suffered from chills and fever since 1872. He thought the disease prevailed as extensively on high as on low ground, and knew of no rules governing the progress of the epidemic.

Dr. Charles Taylor, New Milford, Conn., said that the first cases of chills and fever at New Milford appeared in 1877 on the highest land in the town. In 1878 it appeared in all portions of the village, fully fifty per cent. of the cases on high land. It began to abate in July of last year, and there have been but few new cases the present year. Its disappearance, he believed, is not attributable to drainage. New sewers were put in about the time the fever began to abate, but some of them are not yet connected, and, on one street which was sewered in 1873, the disease has been as prevalent as in those not sewered. Water was brought into the town in 1874.

Dr. James J. Averill, Falls Village, Canaan, Conn., said that he had not found any more cases of chills and fever on low than on high land, and that, as far as he knew, the telluric conditions have nothing to do with malaria.

Dr. Isaac R. Sanford, of Sheffield, Mass., has treated malarial fevers at Sheffield, and at Cornwall, Conn. It is his opinion that ponds do not cause malaria, and that there is no local reason why malaria should not appear at one place as well as another.

Dr. Simeon P. Dresser, Hinsdale, Mass., testified that he has treated twenty or thirty cases of chills and fever in the last two years in Hinsdale, Peru, and Washington. There are three reservoirs in Hinsdale, one of three hundred, one of one hundred, and one of fifty or sixty acres. He could not trace any connection between his cases and these reservoirs. He has had cases on hill-tops, and cited those of two woodchoppers in Peru. They had lived there two or three months, and had recently come from France. They went to Hinsdale for their supplies.

Dr. Charles W. Stratton, of Lee, Mass., had treated cases of chills and fever at New Lenox, but could find no local cause.

Dr. Abner M. Smith, of Pittsfield, Mass., believed fever and ague to be a migratory disease, not due to local causes; but said that swampy land favors malaria, the marsh being a passive condition for its development in the same way that rich ground is for the growth of corn. As a general thing, he believed drainage to be beneficial. but there are places in New Lenox where he thought it would be better if the water were raised four feet higher.

Dr. Paul A. Chadbourne, of Amherst, Mass., President of Massachusetts Agricultural College, ex-President of Williams College, etc., testified that he was a professor in the Berkshire and Maine Medical Schools from 1858 to 1862, and gave instruction as to the nature of malaria. He then believed and taught that it is of gaseous nature, due to decomposition of vegetable matter, and heat. He has now abandoned this theory, and has no opinion as to the cause of malaria based upon facts enough to make it of value. He knows of no theory as to its spread through the country which meets all the cases, and would not say that one locality is more favorable to its development than another. He believed this poison is either affected by vegetable decomposition, or it is not. If it is, the dam at New Lenox covers it up; if it is not, the dam does not affect it.

Dr. Charles W Chamberlain, of Hartford, Conn., Secretary of the Connecticut State Board of Health, has formerly held the marsh theory and the germ theory, but has given them both up. He thinks the reason why more cases of malarial fever are found in river valleys is because the population there is generally more dense than on the hills. He believes it would be impossible so to drain the New Lenox valley as to render it any less liable to chills and fever. He thinks drainage is of value for the prevention of malarial diseases in places where malaria is *endemic;* but when *epidemic*, drainage is of no value. When his last Report of the State Board of Health of Connecticut was completed in December, 1881, he believed and wrote that malaria was most common on low grounds, near water-courses and ponds; and also that drainage was valuable for arresting it. He has since changed his opinion. His opinion as to the value of drainage was based in part upon the results in the town of Fairfield, Conn. He has since then become convinced that drainage did not diminish the malaria in Fairfield. He does not consider malaria as endemic in Connecticut. To be so, it must exist for more than a generation. Where malaria is epidemic he would not be willing, in any locality, to advise the use of any preventive measures, with the expectation that they would be of any use.

Dr. Charles P. Russell, of New York, member of the New York Board of Health, stated that he excludes the marsh theory, and accepts the theory of "pandemic influence." He does not profess to know anything about the causes of malarial fever. He described a *malarial district* as one where malaria has always existed; a *non-malarial district* as one where it only appears occasionally, and for a limited period. He said that in malarial districts drainage has been found useful, as he had himself seen, in many instances; but, in a non-malarial district, drainage is not beneficial. He could not see that any system of drainage could be put on at New Lenox which would keep the ground dry.

Dr. Nathaniel G. Kierle, of Baltimore, Md., Lecturer on Pathology in the University of Maryland, said that he believed the cause of the intermittent fever at New Lenox is the extension to this section of the widespread influence which is prevalent over the country. He cannot tell the conditions under which malaria exists; it will prevail without conditions. Drainage, he said, is useful only so far as it may affect the general health.

Rebuttal. — Several witnesses were introduced by the Commonwealth in rebuttal, among them the two following: —

Dr. William G. Hills, of Boston, Mass., Instructor in Chemistry in the Harvard Medical School, testified that he had examined samples of water taken from the Housatonic River, July 6, 1881. The samples were taken at intervals from the South Street iron bridge in Pittsfield to the bridge at the New Lenox depot. Traces of sewerage were found in the water from the South Street bridge as far as Lathers' bridge, but none below that point.

Dr. Samuel D. Brooks, of Springfield, Mass., stated, in reply to Dr. Breck, that chills and fever have prevailed, to his knowledge, about the water shops pond, in Springfield. Twenty cases have occurred in a sparse population, within half a mile of the pond, during the past three years, including nearly all the families in that vicinity. In each of three families living near the dam one to three cases have occurred. Cases from this locality were treated at the City Hospital in July and August last. At West Springfield, in a low, damp locality, there were twenty to thirty virulent cases in a single month in 1881. The cases at Springfield have been mostly on the side bordering the river. The Holyoke dam holds back the water, and exposes the river bottom, at Springfield.

The closing argument for the defense was made by Judge Soule. He called attention to the difference of opinion among the medical and sanitary experts as to the causes of malaria, which rendered it impossible, he contended, to fix the responsibility for the sickness at New Lenox upon the defendant's dam. He quoted from the testimony of nearly all the experts that the malarial poison is introduced from without, and is prevalent in epidemic form over a large region of country. He showed that about half the witnesses had not noticed any bad smells in the vicinity of the reservoir, whence he argued that the fact of smells had been exaggerated. Finally, he referred to the importance of the interests involved, and said that the result of removing the defendants' dam would be to stop the busy wheels of Lowell and Lawrence.

The District Attorney, in closing for the Commonwealth, quoted from the testimony of witnesses to show that before the dam was raised the amount of boggy land was very small, and produced grass; that the "pockets" were dry, the water clean, and the locality a very healthy one. The raising of the water-level, caused by raising the dam, made the valley swampy, caused water to stagnate in the pockets, and converted a healthy valley into a foul marsh, where malaria found its natural breeding place. The sufferings, loss, and general deterioration of the community, resulting from constantly recurring attacks of fever and ague, were well depicted. The remarkable changes of opinion on the part of certain experts for the defense were not overlooked. He also showed that all examinations of the reservoir, and measurements of the depth and fluctuations of the water, testified to on behalf of the defendants, were made during the present year (1882), when the supply of water has been abundant, and the bottom has been hidden from sight. He contrasted this condition with that in 1880, when, in consequence of drought, a great expanse of marshy bottom was for months exposed to the sun and air, and the deeper portions kept alternately wet and drying, which condition is liable at any time to recur.

Judge Brigham, in his charge to the jury, explained those legal and technical points which were calculated to confuse and perplex, and placed the essential points in the case in their clearest light. He did not especially favor either side of the case, but left it for the jury to decide from the evidence whether or not the defendants' dam had been proved a public nuisance and a cause of the prevalence of intermittent fever in its vicinity.

The jury, after being out for twelve hours, brought in a verdict of *not guilty.*

◆

A RÉSUMÉ OF TWENTY-FIVE CASES OF ABDOMINAL SECTION.[1]

BY J. EWING MEARS, M. D.,

Surgeon to St. Mary's Hospital, Demonstrator of Surgery in Jefferson Medical College, and Gynæcologist to Jefferson Medical College Hospital.

With a view of placing on record the results in a number of cases of abdominal section, and with the hope of contributing to the information possessed already with regard to these operations, I beg to submit the following *résumé* of the cases which have come under my care. I have endeavored to present the points, which were regarded of interest, in a concise manner, for this purpose grouping them under different headings. Of the twenty-five cases of abdominal section, twenty-two were performed for the removal of tumors of the ovary; one was made in a case of encysted dropsy of the peritonæum;[2] one in a case of abdominal dropsy, in which the diagnosis was obscure, and an operation of exploration was made; and one for removal of the child in extra-uterine fœtation. As the case of encysted dropsy has been reported to the college, and as I propose, at a future time, to report the one of extra-uterine pregnancy, I shall present on this occasion a *résumé* of the ovarian cases.

Age of Patients. — In the twenty-two cases the age varied from the youngest, sixteen, to the oldest, sixty-five years.

Nationality. — Sixteen patients were natives of the United States, and six of Ireland.

Social Condition. — Five were single, one was a widow, and sixteen were married.

Duration of Growth. — The duration of growth varied from three months to seven years, counting from the time at which the tumor was recognized first by the patient.

Aspiration or Previous Tapping. — Aspiration, for the purpose of obtaining a specimen of fluid for examination, was performed in eight cases; tapping, to relieve abdominal distention, in four. In one case, in which the cyst was very fully distended by fluid, and the abdominal wall was very tense, leakage followed aspiration, and persisted for some hours, despite the efforts made to control it by pressure. In none of the cases, in which aspiration or tapping was performed, did any serious results occur, nor were there any evidences in the operations, which followed, of complications due to the previous aspiration or tapping. In all cases proper precautions were taken, the patient being required to rest in bed from three to four days subsequent to the operation.

Condition of the Patients at the Time of Operation. — With the exception of two, who were the subjects of malignant disease of the ovary, the condition of the patients was good. All were placed upon preparatory treatment, extending over periods varying from two weeks to two months.

Line of Incision. — In all cases the abdominal cavity was opened by incision in the linea alba, midway between the umbilicus and pubes, the length of the incision varying according to the nature of the tumor and the presence or absence of adhesions. A simple, mono-cystic, non-adherent growth was extracted easily through an opening one and a half inches in length, whilst other tumors, polycystic in character, with numerous and strong adhesions, required incisions from four to six inches in length in order that the hand could be introduced into the abdominal cavity, so as to sweep over the external surface of the tumor for the purpose of detaching adhesions, and also into the interior of the growth to disintegrate its contents, and thus reduce its size. The incisions were invariably closed by the introduction of metallic sutures, — iron or silver wire, — the needle being carried so as to include the peritonæum.

Adhesions. — In eighteen cases adhesions, either parietal, omental, or visceral, existed — differing greatly as to extent and character. In some instances they were so slight as to be separated readily with the finger; in others they were very extensive and very firm, requiring some force to effect their detachment, and exposing denuded, bleeding surfaces. In one of the fatal cases the adhesions were universal, and so firm as to require a minute dissection to be made, in order to effect removal of the cyst. In a second case, a portion of the parietal surface of the peritonæum as large as the palm of the hand, and embracing the subperitoneal fascia, was detached, leaving a broad band of attachment. This was included in three animal ligatures, and the detached portion removed. During the period of recovery, which was not retarded, the patient referred to the position of the exposed surface as a sensitive point. In still another case, an adhesion, in the form of a cord, at least two inches in thickness, and from four to five inches in length, fastened the tumor to the parietes. It was drawn down and a double animal ligature applied before section was made. Hæmorrhage caused by the separation of adhesions has been controlled by the application of carbolized silk and animal ligatures, both ends being cut short, and the ligatures permitted to remain *in situ*. In some instances, torsion of the vessels has been sufficient to restrain the bleeding.

---

[1] Read before the Philadelphia College of Physicians and Surgeons, December 6, 1882.

[2] Reported in the Transactions of this college, third series, vol. i.

Character of the Cysts. — Four cysts were unilocular, sixteen were multilocular, and in two malignant disease existed. In one of the latter medullary cancer involved both ovaries, and in the other colloid disease was present.

Double Ovariotomy was performed in two cases.

Primary or Secondary Operation. — In one case the operation was secondary, ovariotomy having been performed thirteen years previously. In this instance the incision was made to the side of the cicatrix of the primary operation, so as to avoid wounding the pedicle of the tumor removed, which was found to exist as a small cord attached to the inner surface of the abdominal wall, and to be of such length as to permit the uterus to occupy a normal position. Elongation and shrinkage of the pedicle has been observed in post-mortem examinations made in cases in which death occurred some years after ovariotomy.

Treatment of the Pedicle. — In all but one case the pedicle was secured by the application of the clamp; in the case excepted a carbolized catgut ligature was applied, both ends cut short, and the pedicle was returned to the abdominal cavity. In cases of very short pedicles I have been able always to secure them with the clamp, and in no case was it observed that the traction made to accomplish this produced any harm. In one instance of an extremely short pedicle, where, in fact, the wall of the cyst was separated not more than a half inch from the uterus, a double animal ligature was applied, which failed to control the hæmorrhage. The clamp was then applied over the ligature, bringing the uterus well up between the edges of the incision. Although the patient had a tedious convalescence, the ligature and clamp came away in good time, and the abdominal incision healed kindly. Beneath the cicatrix the uterus could be distinctly outlined, and after the return of the patient to her usual duties no complaint was made of pain caused by traction upon the organ. In one case only was there noticed a slight tendency to the occurrence of ventral hernia, and this in a young patient who slipped and fell on the icy pavement a short time after recovery from the operation. A good deal of tension of the abdominal walls was felt in the act of falling, and it was thought a slight detachment of the pedicle had occurred. Rest in bed for a few days, with pressure over the cicatrix, relieved the condition.

In nearly all of the cases in which the clamp was applied it was observed that it could be removed safely at about the same time with the last of the sutures, and, therefore, the healing of the abdominal incision was not materially delayed. In one or two cases both sutures and clamp were permitted to remain longer than usual.

In favorable cases the first of the sutures was usually removed on the sixth day, and the clamp on the eighth or tenth.

In three cases menstruation has occurred by the pedicle. In all of the cases it took place but once, and did not produce any serious inconvenience. It occurred in one of the cases in which double ovariotomy was performed, two clamps having been applied to the pedicles without difficulty.

Strangulation of the intestine has been noted as being due to the use of the clamp. In my observation of the cases of others, and in my own, I have not met with an accident of this nature. As it has followed likewise the use of the ligature, it cannot be ascribed alone to the employment of the clamp.

The support afforded to the uterus by the attachment of the pedicle to the abdominal walls has seemed, in some of the cases, to have been of benefit, overcoming displacements which were productive of much previous discomfort.

In one of the three fatal cases which occurred, the ligature was applied and the pedicle returned to the abdominal cavity; death resulted on the third day from septicæmia, and the autopsy showed the stump of the pedicle softened and covered by a grayish slough. This condition of the pedicle was, I think, not a primary condition, but was a part of the general inflammation which pervaded the abdominal cavity, occurring in a case in which the cyst was adherent in every part to the parietes and viscera, and which required minute dissection to effect its separation.

While the tendency of the present day is to return to the use of the ligature as an exclusive method of treating the pedicle, I think it unwise to discard entirely the clamp. The imbedding of the ligature and its subsequent absorption demand a degree of reparative power, which some much debilitated patients do not possess; in such cases it would appear proper to employ the clamp.

Drainage. — In one case it was thought desirable to secure drainage of the abdominal cavity after operation. For this purpose a large perforated rubber tube was introduced and allowed to remain in position for three days. During this period no fluid escaped, and the symptoms presented by the patient gave no indication of the collection of septic fluids. Of the great value of drainage after ovariotomy there can be no question. Its use is especially indicated in cases in which adhesions of some extent have existed.

Antiseptic Precautions. — In fourteen cases the antiseptic methods were employed in full detail at the time of operation, and partially during the conduct of the after-treatment, the spray being then omitted. The successful results which have attended some of the cases were undoubtedly due to its use. The condition of the patients during the after-treatment was favorably influenced, and convalescence was promoted. Of three fatal cases, one occurred after operation under the system. The tendency of most operators at the present time is to employ a modified form of the system, owing to the fear of constitutional impressions made by agents employed. The constitutional effect of the carbolic acid has been observed in two or three cases in the condition of the urine, other than this no symptoms were noted.

It has been stated above that menstruation by the pedicle occurred in three cases. In one a marked impression was made upon the temperature, and the elevation occurring as it did without being accompanied by a corresponding increase of the pulse-rate attracted attention. On the day preceding the appearance of the flow the pulse was 84 and the temperature normal, 98.5° F. On the day of its appearance the temperature rose to 100° F., and on the third day reached 100.4° F., then declined to 99.6°-99° F., and on the day of the cessation of the flow returned to the normal, 98.5° F., the pulse-rate in the meanwhile remained unchanged. As the elevation of the temperature occurred after convalescence had been fully declared, and the patient was within two days of the period when she would have been permitted to sit up, some anxiety as to the cause existed, which was not relieved until its relation to the presence of the menstrual flux was considered.

In two of the cases pregnancy occurred and terminated safely in connection with the development and growth of the cysts. In both, the cysts had attained large size, and notwithstanding the pressure exerted during parturition rupture did not occur. In one, puerperal peritonitis supervened, causing the formation of extensive adhesions; in the other, slight but firm adhesions were found.

In cases under my care recently, quinine has been administered in large doses in the twenty-four hours preceding the operation, with a view to obviate shock, and in this respect its use has been attended with success. Thirty to sixty grains, in divided doses, have been given, and in each case so treated shock has been absent. In the preliminary and after-treatment it has also been given in tonic doses.

The duration of the operation has varied from thirty minutes to two hours, in the former time mono-cystic non-adherent tumors have been removed and the wound closed. The latter period of time has been required to remove polycystic growths, with extensive and firm adhesions and many bleeding pointsto control. Serious complications during the operation and after-treatment have occurred in but two cases. In one already alluded to the adhesions were so extensive as to complicate seriously the operation, and to render the result fatal. In the other, the slipping of the ligature and the persistence of hæmorrhage for some hours after the closure of the wound complicated the operation. This patient's recovery was slow, two months and a halfelapsing before she was able to leave her bed, in which period there occurred in order the following complications: obstinate, uncontrollable diarrhœa, suppuration of hæmorrhoids, formation of a large bed-sore over the region of the sacrum, with destruction of the sacro-coccygeal articulation, and a condition of blood poisoning, with swelling of the left parotid gland. Recovery finally took place, and the patient has been able to maintain herself by her work as a seamstress.

The size of the tumors varied greatly, and the weight from three to sixty pounds.

With one exception, all of the operations have been performed either in private houses or in a private hospital. One was operated upon in a private room of a general hospital, and in this a fatal result ensued — death, however, could not be attributed to this fact, but rather to the complications which existed in the case. In all cases careful attention was given to the preparation of the apartments, so that the patients should be placed under the most favorable hygienic conditions.

In the cases in which the progress was favorable the patients, as a rule sat up in bed on the twelfth day, and on the fourteenth were permitted to get out and occupy the lounge or an easy-chair. At the end of the third week gentle exercise about the house, and in favorable weather, in the open air, was allowed. This exercise was continued daily so as to prepare the patient, if living out of the city, for the journey home, which was undertaken between the fourth and fifth weeks after operation.

For twenty-four hours after the operation no food was given; at the end of this time, one ounce of milk, with lime-water, if vomiting had occurred, or if there was nausea, was given every three or four hours. In two or three days the amount of milk was increased to two ounces every three hours, alternating with a teaspoonful of beef-juice in three tablespoonfuls of water. In some cases the beef-juice was administered instead of the milk from the first. As convalescence advanced additions were made cautiously to the diet, no solid food being given until the sutures and clamp had been removed and the bowels moved freely by enemata.

Usually enemata of soap water and olive oil were administered on the eighth day, and on alternate days, subsequently, until evacuations occurred naturally. The catheter was used every six or eight hours for five days, and then efforts at evacuation of the bladder were permitted to be made by the patient.

When possible to avoid it, opiates were not administered. When required to relieve pain or secure rest, morphia in one sixth to one quarter of a grain was given hypodermically.

In the twenty-five abdominal sections death occurred in four cases, — three after operation for the removal of ovarian cysts, and one after operation for the removal of the child in extra-uterine fœtation. Septicæmia was the cause of death in two of the ovarian operations, and in the case of extra-uterine pregnancy. Shock and hæmorrhage produced a fatal termination in the case of malignant disease of both ovaries in which double ovariotomy was performed.

◆

A CASE OF DOUBLE OSTEOTOMY AND OSTEOCLASIS.

BY E. H. BRADFORD, M. D.

CASES of osteotomy are at the present time not at all uncommon, and the same may be said of osteoclasis, but the employment of both methods on the same patient is sufficiently unusual to justify the report of the following single case: —

J. B., a girl ten years of age, entered the Samaritan Hospital with marked rickety deformity of both lower extremities. The child was short and rather pale, but apparently of good health; the evidences of previous rickets were slight in the upper extremities and in the thorax. Three years before, the patient had sustained a fracture of the left femur, and had been treated at Bellevue Hospital, New York. The mother thought that that limb was somewhat straighter since the accident, and the deformity was most pronounced on the right side. The internal condyle projected one inch lower than the external; the patella slid to the outside when the knees were flexed. The femora were somewhat bowed outwards and a little forwards. Marked curvature of the tibiæ was present, so that when the knees were flexed, although the upper part of the tibiæ became parallel, the malleoli were separated by a distance of four inches. When the knees were straight this distance became, of course, much greater, owing to the unusual projection of the inner condyle. This separation, however, as indicated in the accompanying illustration, represented two distortions, one at the knee (genuine genu valgum), and the other a curve in the tibia. This bone was also twisted on its shaft so that the line of the crest presented a spiral curve from top to bottom, the line passing from the head of the tibia downwards and inwards, downwards and outwards, and downwards and backwards. To completely correct these curves would require several osteotomies. It was decided instead of this, to perform first McEwen's operation, and gain all that could be gained in that way, and then to break the tibiæ by means of the osteoclast at such a point as would give an approximately straight leg, furnishing a practically useful limb. Repeated osteotomies would give a more perfectly shaped limb, but at the expense of a more severe procedure.

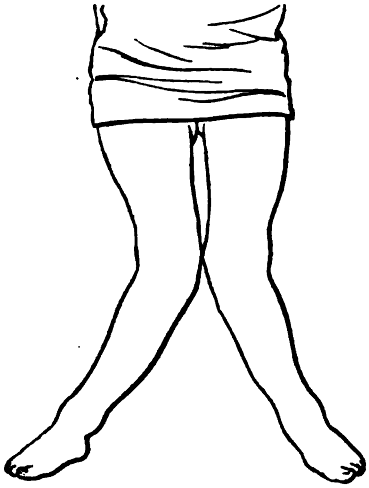


Fig. 1. Before operation (front view).

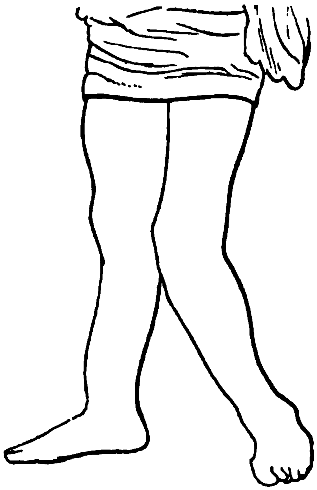


Fig. 2. Before operation (side view).

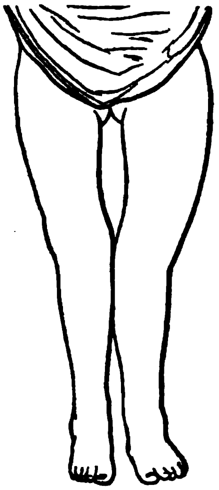


Fig. 3. After Osteotomy.

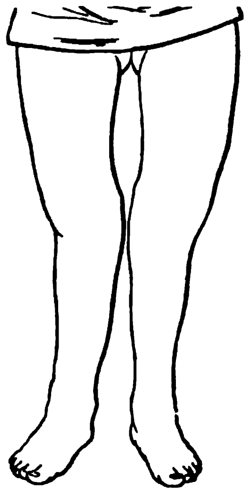


Fig. 5. After Osteotomy and Osteoclasis (front view).

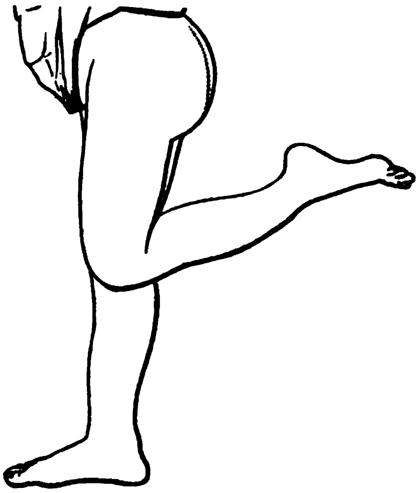


Fig. 5. After Osteotomy and Osteoclasis (side view), showing flexibility at knee.

November 30, 1881, MacEwen's operation was performed on both knees, under strict antiseptic precautions. The limbs were immediately done up in plaster-of-Paris bandages, which were applied directly over the Lister dressings. At the end of a fortnight (no leakage in the dressings having taken place in the mean time) the plaster bandages were removed, and the incisions found healed. The stiff bandages were reapplied and worn until January 12th. After the first few days the child was not confined to bed, but was carried about and allowed to sit in an easy-chair. An opiate was given on the two nights succeeding the operation, but with that exception none was necessary. No febrile disturbance followed the surgical interference. By February 1st the patient was able to walk quite well, and was then sent into the country. On her return osteoclasis was performed, the limbs held in a corrected position, and plaster bandages immediately applied. At the end of four weeks they were removed, and the patient allowed to walk. At the present time, six months after the removal of the bandages, the child is as active as any one, and there has been no relapse in the deformity. The patient is in no way worse for the surgical intervention, and has much more serviceable legs.

◆

A CASE OF GENERAL PARALYSIS.[1]

LOCALIZED CONVULSIONS ASSOCIATED WITH A LIMITED MENINGO-ENCEPHALITIS. DEATH FROM EMBOLISM OF THE PULMONARY ARTERY.

BY GEORGE T. TUTTLE, M. D.,
First Assistant Physician at the McLean Asylum for the Insane.

J. L. S., American, aged forty, married, engineer. Had lived a dissolute life, but enjoyed a good degree of health till the spring of 1878, when, without previous symptoms, he had a convulsion, which was followed for a few days by pain and a feeling of pressure in the head, vertigo, and difficulty in articulation.

After a lapse of eight months he had a second slight fit, and following it the same symptoms as before, with numbness of the left hand and arm. Another convulsion occurred September 18, 1879, and, on regaining consciousness, in addition to previous symptoms, he complained for a short time of diplopia.

After this third convulsion he had delusions, and was at times considerably excited. One of his delusions was that some unknown person applied electricity to his left arm, and he made himself a nuisance in the neighborhood by searching for the man and the machine. He was admitted to the McLean Asylum September 25, 1879. There was then slight right facial paralysis. The right pupil was much larger than the left; the tongue protruded straight, but showed marked fibrillar tremor; articulation not impaired; no lack of coördination could be detected in arms or legs; patellar reflex perhaps slightly exaggerated.

---

[1] Read before the Boston Medico-Psycological Society.

A physical examination of the chest and chemical analysis of the urine showed nothing abnormal. Pulse and temperature normal.

He exhibited a considerable degree of mental weakness, was deluded, and willingly came to the asylum to escape the persecution of the man with the battery as well as for treatment of his left hand, the bones of which he thought were rotten.

During his hospital residence he had at irregular intervals brief paroxysms of pain and a burning sensation in the left hand and arm, occasionally in the head, and once in the left leg. Sometimes with the pain he had involuntary movements of the muscles of the left arm. January 5, 1880, after quite violent exercise, he suddenly felt as though something struck him on the head; "it sounded like a drum." He was in great fear of death, and was sure he would have a convulsion, for he could "feel it coming up from his feet." While talking there was conjugate deviation of the eyes to the left. There was constant slight twitching of the muscles of the left fore-arm, and at times those of the forehead, eyelids, and left leg participated in the order named. Finally in about half an hour a general convulsion occurred, of two minutes' duration, beginning with opisthotonos, the head in the tonic stage being gradually and strongly turned to the left. He regained consciousness in an hour.

The next morning, on a comparison of the two sides, no difference in sensation could be detected in the limbs, body, or face. There was no paralysis and no albumen in the urine. The pulse and temperature were carefully taken for a short time after three of the convulsions. It was observed that the temperature was invariably higher on the left side.

During the next month he had two more convulsions, of which the above will serve as a description.

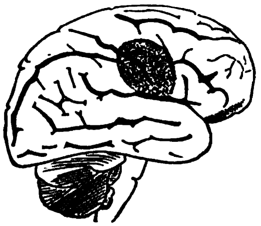
While he had the pain and involuntary movements of the hand his face was pale, and the extremities were cold, so that when, on March 31st, he had the premonitory symptoms of a general convulsion he was given all the brandy he would drink, about four ounces, and allowed to inhale nitrite of amyl. He escaped a convulsion. May 23d there were similar symptoms, but no treatment was given; in an hour he had a convulsion. June 22d, another convulsion. Treatment was attempted, but the patient was not seen soon enough; he vomited the brandy, and had scarcely begun inhalation of the amyl before the convulsion came on. From this time till January 26, 1882, the man had no convulsion when the treatment was begun in season, and properly applied. Sometimes brandy alone was used, sometimes the amyl, but usually both, aborting, perhaps, twelve convulsions. He is known to have had three in this time, no treatment having been given. In the course of the disease there were very many partial and quite a number of complete convulsions. The partial seizures were for the most part confined to the left arm, and the complete ones were always, so far as observed, preceded by involuntary movements in that limb. In the course of time marked ataxic symptoms appeared. His mind gradually became weaker, and he developed the condition of self-satisfaction so commonly observed in this disease. He soon thought himself possessed of great knowledge and power, for example, that he knew where each one was at all times, and by clapping his hands and giving the word of command could stand him on his head; he did this regularly and systematically, and thus punished those who in his opinion had anything to do with the electricity. His delusions became even more characteristic, and he thought himself possessed of fabulous wealth, as well as great personal strength.

December 23, 1881. While giving a bath the attendant noticed that the right leg was badly swelled. There was found to be considerable enlargement from the groin to the toes; it was dark in color from distention of the superficial veins, and pitted on pressure below the knee. He was so fleshy that no thickening could be detected in the course of the saphenous vein, and by this time so far advanced in dementia that he could not understand that anything was the matter.

January 26, 1882. He was found dead on his bed, having died apparently without a struggle.

Autopsy by Dr. W. W. Gannett, forty-two hours after death. Body well developed, well nourished, subcutaneous fat tissue everywhere very abundant. Lividity of dependent portions. Right thigh and leg slightly larger than left, not pitting on pressure. Rigor mortis marked. Ratio of head to body and cranium to face apparently normal. Skull markedly brachycephalic, symmetrical. Calvaria of normal thickness; its removal was attended with the escape of considerable clear fluid; ratio of diploë to tables normal. Dura mater quite firmly adherent to calvaria in central line, everywhere thin and translucent; nothing unusual observed on external or internal surface. Superior longitudinal sinus contained a small amount of liquid. Other sinuses showed nothing abnormal. There was a considerable collection of clear serum in the meshes of the pia uniformly distributed over the convexities; moderate thickness and opacity of the pia along the course of the vessels. Vessels at base of brain and in fissure of Sylvius showed nothing abnormal. Each lateral ventricle contained about ten centimetres of fluid. Ependyma slightly thickened and granular. Floor of the fourth ventricle granular, roughened.

Brain substance rather flaccid, but tough. Sulci in anterior portion wider than usual. On section, ratio of gray matter of cortex to white matter somewhat diminished; this most marked in anterior frontal region; gray matter pale. Section of white matter showed moderate moist surface; puncta cruenta well marked, though rather small. Section of corpora striata and optic thalami showed a diffused, pale, snuff-colored appearance. Section of medulla, pons, and cerebellum showed nothing abnormal. The pia was adherent, tearing away brain substance, on its removal, over the lower portions of the ascending frontal and parietal convolutions on the right side, as indicated in the diagram.



There was chronic adhesive pleurisy of the left, marked œdema of both lungs. In the right primary pulmonary artery was a firm, homogeneous, pale-red thrombus, one end of which extended into one secondary pulmonary artery, the other end into the other branch, forming a rider completely obliterating the lumen of the vessel, in one portion adherent to the inner wall. In the right iliac and femoral veins, from a point about six centimetres below the inferior vena cava to the popliteal region, was a thrombus, tolerably firm, homogeneous, dark blue, for the most part adherent to the wall, and in many places completely obliterating the lumen; the end towards the vena cava was irregular.

Other organs were found to be sufficiently normal.

The points of interest in the case are, —

(1.) The great number of the partial convulsions, and their limitation to the left arm, taken in connection with the localized meningo-encephalitis.

(2.) The gradual way in which the general convulsion came on, giving ample opportunity for treatment.

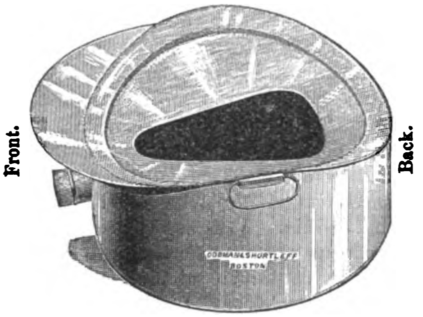
(3.) The successful use of alcohol and nitrite of amyl.

(4.) The thrombosis of the iliac and femoral veins, perhaps due to long-continued horizontal position, and the obvious mode of death. The thrombus probably gradually extended up the iliac vein till it projected into the vena cava; the blood current from the other leg swept away a portion which lodged in the pulmonary artery, causing death.

New Instruments.

VAGINAL DOUCHE.

The vaginal douche apparatus, figured in the diagrams, was designed by Dr. W. H. Baker several years ago; but, although it has been used in several hospitals and by the patients of a number of physicians who have obtained it privately[1] for them, it has never been formally brought to the notice of the profession.



Vaginal Douche Pan.

Douche Pail.

The pan, which is made of tin, is of sufficient size to contain the large quantity of water used in a single douche; it is suitably curved to support the buttocks comfortably, and is provided with a broad flange in front to prevent the water flowing from the vagina from wetting the bed. The pail, also of tin, will contain six quarts, which in most cases is sufficient for a single douche. Fitted to the pail is a long rubber tube provided with a compressing catch and a vaginal tube of hard rubber. The hard rubber tube is superior to that of block tin in being a poorer conductor of heat, and therefore less likely to cause annoyance when *in situ*. This vaginal tube is provided with holes only in the sides of the bulbous end, as water is less liable to enter the uterus than when the tube has a central aperture.

The proper method of using this apparatus is as follows: —

The pan should be placed on a bed or sofa, with cushions or pillows so arranged behind it as to support the patient's back in comfort; a small pad or folded towel may be placed over the posterior edge if the patient desires it. The pail, filled with water at a temperature of from 110° to 115° F., should be suspended from a hook in the wall, or placed in any other convenient way, at such a height that at least twenty minutes would be required for the pail to empty itself. The patient should then assume a reclining position, supporting the feet on a pillow if necessary; the head should be slightly raised, but the shoulders should rest on a level with the bottom of the pan, in order that the pelvis may be relatively higher, and the too speedy outflow of the water from the vagina thereby prevented. The patient should then hold the vaginal tube over the pan, and raise the lever of the compressing catch to insure the complete expulsion of air before introducing the tube into the vagina. G.

Reports of Societies.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

The Society held its seventeenth regular meeting at the residence of Dr. T. W. Fisher, at the City Lunatic Asylum, on the evening of April 6, 1882, Dr. F. W. Page occupying the chair. There were present Drs. Ayer, Boland, Channing, Cowles, Denny, Fisher, Jelly, Page, Tuttle, and Schwab.

Dr. George T. Tuttle read the paper of the evening, which was entitled

A CASE OF GENERAL PARALYSIS ASSOCIATED WITH A LIMITED MENINGO-ENCEPHALITIS. DEATH FROM EMBOLISM OF THE PULMONARY ARTERY.

A full report of the case will be found on page 612.

In the discussion following Dr. Tuttle's paper, Dr. Jelly asked if there were any syphilitic indications.

Dr. Tuttle said there were not, but anti-syphilitic treatment had been continued for some time.

Dr. Denny said that symptoms of epilepsy were rarely found in general paralysis. Sometimes the anterior portion of the gray matter was affected, and then similar symptoms might be developed. In some of the early stages, aphasia might occur. He remembered one case at the Longview Asylum, in which the patient, a man, had the characteristic symptoms of general paralysis and frequently suffered from slight aphasic attacks. In regard to the development of epilepsy late in life, a patient of Dr. Denny's, twenty-eight years of age, is now developing symptoms of the disease.

---

[1] Messrs. Codman & Shurtleff are now prepared to furnish this apparatus.

Dr. Fisher said that in the fifteen autopsies, in cases of general paralysis at the South Boston Lunatic Hospital, one sided lesions had not been found.

Dr. Boland thought that it would be unusual to find cases of general paralysis beginning with delusions of persecution. Might it not have been a case of delusional mania?

Dr. Tuttle thought not.

Dr. Page mentioned a case of fainting fits which was found to be *petit mal*, with melancholia. A year after, when the patient died, a cerebral tumor was found.

Dr. Fisher then proceeded to read his paper on Guiteau, entitled

WAS GUITEAU SANE AND RESPONSIBLE FOR THE MURDER OF PRESIDENT GARFIELD?

This paper was published June 20, 1882, in the Boston Medical and Surgical Journal.

Dr. Denny said that he had approached the question of Guiteau's mental condition from the point of sanity, but he had exhausted all arguments in this direction, and was finally led, from the weight of evidence, to believe that Guiteau was insane. There was a similarity in the case of Guiteau and Freeman, in some ways. The suddenness of conception was the same, or rather the way they expressed themselves about it; also the way they had struggled against the desire and the fixedness of the idea. The deed itself showed insanity.

The case never should have been brought to trial. The test of the court was antediluvian, and not in accordance with the teaching of the present time.

Dr. Cowles said that the opinions of the inmates of asylums were interesting in connection with this case. One patient took the ground that it was a mistake to have tried Guiteau. The District Attorney should have placed him in the hands of a Commission. It was a mistake to have made in this case a precedent of sanity.

Dr. Cowles asked Dr. Fisher what he thought of the popular opinion that Guiteau was shamming?

Dr. Fisher thought that this was not the opinion of the most intelligent observers. He seemed to be *only Guiteau.*

A committee was appointed to formulate an expression of opinion on the trial of Guiteau to be presented at the next meeting of the Pyschological Section of the Suffolk District Medical Society.

There being no further business the meeting adjourned.

Recent Literature.

On the Diseases and Injuries of the Eye. A Course of Systematic and Clinical Lectures to Students and Medical Practitioners. By J. R. Wolfe, M. D., F. R. C. S. E., etc. Philadelphia: Presley Blakiston. 1882.

In a publication in the form of a series of lectures it may usually be expected that the personal opinions of the author will have more prominence than would be given to them in a more systematic treatise, and this expectation increases the interest with which we take up the book. But, although in the volume before us the individuality of the author is sufficiently evident, we carry away from it a feeling of disappointment that the points on which he differs from the views generally held are not so presented as to convince of the correctness of his opinions.

The book seems to bear evidences of hurried and careless preparation almost throughout, and there is often an inaccuracy of expression which makes it, to say the least, difficult to understand the meaning intended. Thus, to search for a foreign body under the upper lid: "The eyelid should be everted without the use of instruments, simply by paralyzing the orbicularis by pressure between the index finger and thumb, then lift it with a probe, and look deep into the cul-de-sac." An injunction which we must freely confess our inability to fully comprehend.

In the first lecture, devoted to the anatomy and physiology of the eye, the transformation of the retinal purple by light is said to be "the essence of perception of light and color." Yet the retinal purple is found only in the rods, not in the cones, and in the fovea and its immediate neighborhood, where vision is most acute, it does not exist.

The pigmented cells which form a layer at the posterior surface of the retina are called migratory cells. But the only basis for this statement is the fact that the contained pigment granules move from one part of the cell to another with changes of light. As to the mechanism of accommodation, the theory preferred is that according to which the circular portion of the ciliary muscle compresses the rim of the lens, and so accommodates the eye for near vision, while the radiating part of the muscle withdraws, the ciliary processes from the circumference of the lens, causes the lens to return to its condition of a state of rest, and thus accommodate the organ to distant vision.

Catarrhal conjunctivitis is regarded "as a form of erysipelas of the conjunctiva, and its genesis, like most causes of erysipelas, to be traumatic, dusty particles in the air lacerating the epithelial surface."

Very satisfactory treatment of trachoma, from which the author has in ten years seen no reasons to depart, consists in free scarification, squeezing out of the sago-like deposit, and application of syrup of tannin, with friction.

The section on Parenchymatous Keratitis contains no word as to danger of iritis.

Sympathetic ophthalmia is described less thoroughly than its importance demands, and without hint of the condition known as sympathetic irritation.

"The fact is, as Donders has demonstrated, that asthenopia is *always* the result of latent hypermetropia." The italics are ours. No one, we imagine, will be more surprised at this assertion than Donders himself; if it be true, diagnosis will be greatly simplified in a not inconsiderable class of cases.

Dr. Wolfe has been widely and favorably known from his ingenious and successful device of transplantation of the conjunctiva of the rabbit for the cure of symblepharon, and of large portions of skin, without pedicle, in cicatricial contraction of the lids. We cannot think the present work will add greatly to his reputation.

Medical and Surgical Journal.

THURSDAY, DECEMBER 21, 1882.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

ANNUS MEDICUS.

With this closing issue of the year, following the former custom of this journal, we recapitulate some of the leading events in the medical world. The year has, fortunately, been free of startling or sensational occurrences, but has contributed a creditable contingent to the sum of professional literature. Of this we have endeavored to furnish a fair representation to our readers, and shall not attempt to review the many valuable papers of the year. Of events of general medical interest we allude to the following: —

The Harvard Medical School has during the year suffered the loss of two of its most distinguished teachers, but retains them, as we trust it will for many years, on its list of emeriti. The retirement of Professors Bigelow and Holmes is too fresh in the minds of our readers to demand more than mention. While the school has lost the prestige of two of the most illustrious names in its history, it is gratifying to feel that the work is to be taken up by strong hands. Dr. D. W. Cheever has succeeded to the chair of surgery, and Dr. Thomas Dwight is to deliver the lectures on anatomy during the remainder of the year.

Among other eminent teachers who have retired from active work, but who still continue to enjoy the fruits of their labors and the esteem of the profession, we may mention Dr. Samuel D. Gross, who resigned the professorship of surgery in Jefferson Medical College March 27th, at the age of seventy-seven, after a brilliant service of twenty-six years. Dr. Gross has crowned his age by the issue of a new and carefully revised edition of his work on surgery.

In this connection we may refer to the retirement of Surgeon-General Barnes, and the appointment of Assistant Surgeon-General Crane as his successor.

Early in the year the antivivisection movement, championed by a few hopeless fanatics, became a question of great moment for our English brethren. Legal impediments and restrictions amounting to a practical prohibition of all physiological research had been thrown about experiments upon animals, and such men as Lister, Ringer, Fraser, and Ferrier were estopped from their investigations. About the beginning of the year Miss Frances Power Cobbe, the secretary of the Antivivisection League in England, was active in procuring the arrest of Dr. Ferrier for making some remarks at a scientific meeting *à propos* of some monkeys that had been operated upon several months before, as therein being guilty of "conducting an experiment" without a license, and being accessory to the crime of keeping an animal alive after anæsthesia had passed off. Fortunately the good sense of the magistrate promptly dismissed the charge, but the secretary has since continued her violent opposition to science, and has written a magazine article containing an unreasonable arraignment of the medical profession as cruel, selfish, and dishonest. She took occasion in this paper to advocate the principles and practice of homœopathy, presumably from the fact that that system requires no scientific researches of any sort on the part of its practitioners. Unfortunately the restrictions upon experimental study have not been removed, and physiologists can only pray for liberal interpreters of a law which is more honored in the breach than in the observance.

Perhaps the leading event of an ethical bearing during the year was the action of the Medical Society of the State of New York, taken at their annual meeting February 7th to 9th. As will be remembered, this removed all restrictions as to professional fellowship previously maintained, and sanctioned the meeting in consultation all "legally qualified practitioners of medicine." It was the first step taken by any medical society in opposition to the invariable usages and traditions of the profession. The American Medical Association, meeting at St. Paul, the first week in June, expressed its unfavorable opinion of this innovation by refusing to recognize or admit to its deliberations the delegates from the New York Society. The district branches of that Society have for the most part selected their representatives for the next annual meeting of the State organization, and it is understood that the majority of them are in favor of a repeal of the new code, and have been instructed by their constituents so to vote.

Probably no discovery of the year has attracted so wide attention, especially among the non-professional public (owing to the prominence given to it by a letter of Tyndall in the *London Times*), as that of Koch, announced before the Berlin Physiological Society, and first published in the *Berliner klinische Wochenschrift*, April 10, 1882. This was a demonstration of the form, position, and characteristics of a new parasite, named by its discoverer *Bacillus tuberculosis*, of its propagation by culture-fluids, and the production of tuberculosis by the inoculation of this parasite. Other observers have abundantly confirmed the presence of this bacillus in the sputa of phthisis, but the question of vital importance, whether by an inoculation with this modified virus mankind can be rendered insusceptible of contracting the disease which is now the scourge of the civilized world, is not yet solved satisfactorily. Important and striking as is the discovery of Koch, we believe it is not the opinion of pathologists that it has as yet furnished us with any therapeutic hint of value.

The great question of medico-legal interest during the year has been the mental condition and moral responsibility of Guiteau. Our own views on the subject have been sufficiently stated. Following the trial there were attempts at obtaining a stay of proceedings, and at securing a commission *de lunatico inquirendo*, all of which failed, and the prisoner was executed June 30th. The somewhat uncertain and varying conclusions from the autopsy have been the means of continuing the discussion since. Criticisms of the treatment of President Garfield's wound have also been abundant, the most notable being that of Professor Esmarch, published in full in the JOURNAL. Much has been written in the medical as well as in the non-professional press, evidently prompted by personal prejudices, and the closing chapter of a generally unpleasant subject was the scaling down by the Board of Audit of the professional fees in the case to figures hardly comparing favorably with the pay of the nurses or the liquor bills of the congressional delegation who attended the funeral.

An interesting case, from a toxicological point of view, was that of the murder, in England, by George Henry Lamson, a young surgeon, of his brother-in-law, by the administration to the latter of a large amount of aconitia in a capsule given for the ostensible purpose of demonstrating the convenience of that method of administering nauseous medicines. The circumstances we have not room to recount, but the chemical examination showed in various viscera of the body an alkaloidal extract, which produced the characteristic symptoms of aconitism as the result of administration to the investigators, and death from larger doses given to animals. Lamson was sentenced, and, in spite of strong efforts at reprieve, executed.

The bill to regulate the practice of dentistry, which passed the Massachusetts legislature last spring, was vetoed by Governor Long on the ground that it gave the power of controlling the practice of dentistry to one society, which might, in his opinion, easily establish a monopoly.

In April eight out of nine members of the post-graduate faculty of the Medical Department of the University of the City of New York resigned, owing to the fact that they were not allowed a voice in the government of the institution, and also because the governing body had not given them the facilities for instruction which were considered necessary. The result of this move has been the establishment of two new institutions, the Post-Graduate Medical School, and the New York Polyclinic, each of which includes distinguished names on its faculty, and appears to be doing useful work and filling a much needed requirement in medical education.

The second series of Cartwright Lectures, three in number, were delivered in New York in January and February on The Experimental Method in Medical Science, by Dr. John C. Dalton. The course was a worthy successor to the inaugural series of the year before by Dr. Bartholow, and presented the claims of experimental study, particularly with reference to the complex phenomena of the nervous system. In England the Croonian Lectures were delivered in March, before the Royal College of Physicians, by Sir Joseph Fayrer, on the Climate and Fevers of India. The Gulstonian Lectures, on Pulmonary Cavities, their Origin, Growth, and Repair, were given by Dr. William Ewart. The Lumleian Lectures, on Inflammation, were by Dr. J. Burdon-Sanderson.

During the spring numerous public hearings were given in London by the Select Committee of the House of Commons on the Contagious Diseases Act, which were reported in detail in the British journals. A very large proportion of the time was granted to the opponents of those acts, whose opposition was founded chiefly on moral grounds. Yet the committee, whose labors have extended through three years, reported that not only was the hygienic effect of the acts good upon the soldiers (it is chiefly in the garrison towns that the supervision of venereal diseases has been attempted), but that neither in theory nor in practice was there tenable objection on grounds of morality. It was even claimed that so far from making prostitution safe and popular, there was a diminution in the gross number of prostitutes as a result of the periodical examination to which they were subjected. While the committee recommended no repeal of the existing law, they did not advocate its extension over any additional districts at present, on the ground that public sentiment was not ready for it.

The jubilee meeting of the British Medical Association, the fiftieth anniversary of its organization, was held at Worcester last summer, and was the occasion of a large gathering, of some valuable papers, numerous felicitous speeches, and much hospitality on the part of the local branch. Mr. Hastings, M. P., gave an address commemorative of his father, Sir Charles Hastings, who founded the Association and inaugurated it by an address delivered fifty years before in the same city.

Among other notable gatherings we may mention the meeting of the American Social Science Association at Montreal in September; the celebration of the three hundredth anniversary of the University of Würzburg, held in August; the meeting of the International Sanitary Congress, Geneva, in September; that of the American Laryngological Association in Boston in June, and of the American Gynecological Society in Boston in September.

At the beginning of the year there were in Boston 5 cases of small-pox at the Canterbury Street Hospital. During the year there occurred 26 cases, with 8 deaths, of which only two had been vaccinated. The last case reported was on June 23d, and was discharged well August 5th. The stamping out of this epidemic in Boston is due to the energy and watchfulness of the city physician and Board of Health.

Up to December 23d there had been, according to the figures furnished by the City Physician, in the city 1296 cases of diphtheria, with 436 deaths; 645 cases of scarlatina, with 71 deaths; 791 cases of typhoid fever, with 208 deaths.

NECROLOGY.

The year, which has closed so many brilliant careers in the domain of literature and science, has not spared our own profession, and we are obliged to chronicle the loss of some eminent minds, who have contributed much to the advancement of medical knowledge.

John W. Draper, M. D., died January 4th, at the age of seventy-one. He filled successively several chairs of natural science in the University of New York and in the University Medical College, and was long President of both the Scientific and Medical departments. He was a prolific writer on chemical and physiological topics, and also had attracted much attention by articles on literary subjects. In 1874 he received the medal of the American Academy of Science for his researches on Radiant Matter. He was universally recognized as one of the most eminent scientists and philosophers that America has produced. Equally eminent with the father was the son, Prof. Henry Draper, whose death occurred November 20th. He had been Professor of Physiology both in the academic and the medical departments of the University, and succeeded to the chair of Chemistry left vacant by his father, but soon resigned the position to devote his time to astronomy and celestial photography, in which he had achieved a high reputation.

Sir Robert Christison, Bart., M. D., F. R. S., died at Edinburgh, January 27th, at the age of eighty-five. He had formerly been Professor of Medical Jurisprudence in the University of Edinburgh, and later was Professor of Materia Medica. He was made a baronet in 1871, was twice elected President of the Royal College of Physicians, Edinburgh, and at the time of his death was physician in ordinary to the Queen for Scotland. His Treatise on Poisons is a standard work.

Joseph Pancoast, M. D., Emeritus Professor of Anatomy in Jefferson Medical College, died at Philadelphia, March 7th, at the age of seventy-seven. He had for many years been a prominent practitioner and teacher, having held the chair of surgery before that of anatomy. He was the author, among other works, of a treatise on operative surgery, and was known as an exact anatomist and a careful operator.

Dr. Theodore L. Mason, of Brooklyn, died in February, at the age of seventy-nine. He was especially interested in the treatment of inebriety as a disease, and was President of the American Association for the Cure of Inebriates. He was also a prominent member of the New York Medical Society, and the American Medical Association.

Dr. Junod, of "Junod boot" fame, died February 25th. He was a Swiss by birth, but had spent most of his professional career in Paris, where he died.

Another noted name which is not included in our list of the deaths in the Massachusetts Medical Society, for the reason that his demise occurred in the last days of 1881, is that of Dr. Edward Reynolds. As one of the founders of the Massachusetts Charitable Eye and Ear Infirmary, as an ophthalmic surgeon, and a general practitioner, he had led a useful and a busy life, and at the ripe age of eighty-eight he died leaving an enviable reputation for personal integrity and professional honor.

In April science lost one of her foremost prophets and exponents in Charles Robert Darwin, whose name as a naturalist and biologist was known throughout the civilized world. The obligations of medical science to his researches and inductions are great, and medicine will probably in all future time feel the influence of the theory of evolution.

Sir John Rose Cormack, the founder of the *Edinburgh Medical Journal*, died at Paris in May, where he had resided for twelve years. He rendered great service during the Franco-German war, and was made Chevalier de la Légion d'Honneur.

Prof. James R. Wood, of New York, died in May, at the age of sixty-six. He had a high reputation as a surgeon, and had for years been collecting a valuable museum, which he handed over to the Commissioners of Charities of the city about a year before his death.

Dr. Andrew Buchanan, Professor of Physiology at Glasgow, died July 9th, at the age of eighty-four. He was the inventor of the rectangular staff for lithotomy, and was a discoverer of the cause of the coagulation of the blood.

F. M. Balfour, LL. D., F. R. S., the newly appointed Professor of Morphology at Cambridge, England, was killed on the Swiss Alps. He was thirty years of age.

Carl Mayrhofer, Professor of Gynæcology, Vienna, died June 3d, aged forty-six.

Joseph Thomas Clover, F. R. C. S., Eng., b. 1825, died October.

Robert Wishart Lyell, M. D., F. R. C. S., b. 1849, assistant surgeon Middlesex Hospital, died October 1st,

George Critchett, F. R. C. S., Surgeon Moorfields Eye Hospital, died November 1st.

Prof. George Gulliver, Hunterian Professor of Comparative Anatomy and Physiology, died November 17th.

William Pirrie, F. R. C. S., Ed., Emeritus Professor of Surgery, Aberdeen, died November 21st.

NECROLOGY OF FELLOWS OF THE MASSACHUSETTS MEDICAL SOCIETY.

(*Furnished by kindness of Dr. F. W. Goss.*)

Cyrus Bell, of Feeding Hills, died September 10, 1882, aged seventy-nine.

Abner W. Buttrick, of Lowell, March 27th, thirty-nine.

Phineas M. Crane, of East Boston, August 13th, seventy-seven.

Daniel M. Elliot, of Peabody, July 26th, forty.

John B. Foley, of Roxbury, July 25th, thirty-two.

Samuel H. Gould, of Brewster, August 25th, sixty-seven.

Albert S. Herrick, of Lowell, June 5th, thirty-eight.

Christopher C. Holmes, of Milton, July 16th, sixty-four.

George M. Howe, of Framingham, September 16th, fifty-eight.

John H. Jennings, of New Bedford, July 31st.

Othello O. Johnson, of Framingham, January 8th, sixty-four.

William P. Kelly, of Boston, April 9th, twenty-six.

Sanford Lawton, of Springfield, July 24th.

Jonathan Leonard, of Sandwich, January 29th, seventy-eight.

Augustus Mason, of Brighton, May 23d, fifty-six.

James Morison, of Quincy, May 20th, sixty-three.

George Osborne, of Peabody, September 21st, eighty-three.

Ebenezer S. Phelps, of Middleton, May 28th, ninety.

Menzies R. Randall, of North Rehoboth, July 23d, eighty-eight.

Jeremiah J. Reardon, of Natick, January 22d, thirty-two.

Herbert Shurtleff, of Campello, March 31st, thirty-five.

Isaac Smith, Jr., of Fall River, January 20th, forty.

Horace Stacy, of Boston, May 5th, sixty-eight.

George Stearns, of Groton, March 7th, seventy-nine.

Obed C. Turner, of North Cambridge, October 31st, forty-two.

Also the following honorary members: —

Augustus A. Hayes, of Boston, June 21st, seventy-six.

James R. Wood, of New York city, May 4th, seventy.

February 12th, at Rome, Prof. Gaetano Valerj, M. D., well known to many American visitors in Rome.

◆

MORE DIPLOMAS?

THE natural result of the existing laws and the judicial interpretation, as given by us last week, may be seen in the following item cut from the daily press: —

> The American University of Boston has been incorporated, with Joseph Reader Buchanan as president, and R. C. Flower as treasurer. The object of the institution is to establish a college of therapeutics, a college of general culture, a college of industry, and such other departments as time may render necessary or desirable for the development of the moral, intellectual, industrial, and vital capacities and character of persons of all ages, for the cultivation of science, art, literature, and ethics, by investigation and propagation of knowledge, and for the preparation of pupils for all honorable vocations in the arts, sciences, skill, and virtues.

Such a sudden growth is rather appalling even in this age of steam and electricity. The royal road, if not to learning, at least to its outward insignia, has been found at last. Who can longer doubt that at the blow of the brazen axe of the blacksmith Vulcan Minerva sprang, fully armed, from the head of Jove, or that the adventurous Jack climbed to unknown regions beyond the clouds, on a bean-stalk, which sprang up during a single night.

We deem it our duty to give what publicity we can to this rapid incorporation of educational institutions, but a journal which appears but once in seven days can scarcely hope to accurately chronicle the growth of mushrooms in even so small a State as Massachusetts. We cannot promise to keep our readers informed of the variations in the market prices of diplomas, but we can assure them that our efforts shall be unremitting.

Already we can see, not far off, the day when no man shall be too poor to practice the noble art of healing with the protection of a diploma, or if, perchance, any shall lack, let him join himself with his uncle and his neighbor, who is like minded with himself, and become incorporated under the laws of Massachusetts, and he shall adorn himself with as many degrees as ambition can desire, or the most unlimited purse could purchase. Future governors shall enumerate among the causes for thanksgiving that the ratio of college graduates to the population exceeds that of any civilized country on the globe, and the charitable shall form societies for the distribution of diplomas among the heathen. Benevolent spinsters shall purchase for their beloved pastors the coveted D. D., and success in a gubernatorial campaign shall no longer be a necessary step to the possession of an LL. D.

God save the Commonwealth of Massachusetts.

◆

MEDICAL NOTES.

— The New York Academy of Medicine have passed resolutions of sympathy and condolence with Dr. Edward C. Seguin.

— At the burning of a gun-shop in this city recently, the firemen performed the act familiar to the novelist, but exceedingly rare in real life, of carrying a large canister of gunpowder in their arms when the flames singed the clothes of one of the bearers. Hardly was this removed, when a fusilade of cartridges began, through which the firemen worked with the utmost nonchalance.

— It is estimated that there are 35,000 people in New York City and Brooklyn whose business requires them to turn night into day. This estimate does not include the thieves and other criminals who thrive best under cover of darkness, but refers only to those whose regular and legitimate pursuits compel them to reverse the natural order of work and rest. Four fifths of these people live in Brooklyn and Jersey City.

— We have received Walsh's Call-Book and Tablet, Lindsay and Blakiston's Visiting List, and Leonard's Pocket Day-Book for 1883. Blakiston's is the least bulky, Walsh's contains the greatest number of tables, and Walsh and Leonard are alike in being adapted to any year equally well with the coming one.

NEW YORK.

— The Hospital Saturday and Sunday Association of New York has compiled a statement of the work and resources of the hospitals connected with the Association for the year ending September 30, 1882, from which the following statistics are taken: The total expenses of the hospitals were $442,760.68; current expenses for the care of patients, $409,590.26; total income from invested funds, $106,449.81; amount received from paying patients, $79,072.71; amount received from city, county, or State appropriations, $58,156.38; amount received from collections in 1881, $33,815.44; amount received from subscriptions other than bequests and gifts to the permanent fund, $152,066.07; receipts applicable to current expenses, $409,084.35; total number of patients treated in hospital, 9165, of whom 6945 were free patients; total number of days of hospital care, 368,374, of which 261,705 were free.

— At a meeting of the Board of Estimate and Apportionment, held December 15th, Mrs. Josephine Shaw Lowell appeared on behalf of the State Commissioners of Charities, and read a communication in relation to the attendance of physicians at the city insane asylums, in which she asked that the appropriation for salaries of such physicians should be increased. On account of the small salaries allowed the physicians were constantly resigning, and their number was always smaller than it ought to be for the proper care of so many patients. Dr. MacDonald, of the Ward's Island Asylum, had reported that during the year six assistant physicians under him had resigned because of the inadequate pay. This institution had at present 1232 patients, and the appropriation for salaries and wages was $46,595, while the female asylum on Blackwell's Island had 1345 patients, with an appropriation of but $34,500 for this purpose.

— Dr. Hugo Kuenstler, a German physician in Harlem, a graduate of the College of Physicians and Surgeons in 1871, recently died very suddenly while attending a patient in her confinement. Just before the birth of the child he fell to the floor, and then expired in a few minutes. For some time previously he had been suffering from chronic meningitis, and Dr. Cocks, the physician who had attended him, was of the opinion that death was due to resulting abscess of the brain.

— Dr. Alexander N. Dougherty, one of the best-known surgeons of Newark, New Jersey, died suddenly of disease of the heart on the 28th of November. He was a graduate of the College of Physicians and Surgeons, and was sixty-two years of age. During the late war he was medical director of the Army of the Potomac, and at the battle of Gettysburg was one of the first persons to arrive at the side of General Hancock when he was wounded. He was at one time President of the New Jersey State Medical Society, and always took an active interest in its affairs.

— Mrs. Margaret Lundrigan died in New York, December 10th, at the age of one hundred and three years. She was born in County Kerry, Ireland, in 1779, and was seventy years of age when she came to this country. The ocean voyage gave her but little inconvenience, and she never suffered from illness until two months before her death. Up to that time she did fine needlework, being an expert seamstress, and it was only during the past two years that she found it necessary to wear glasses. She was the mother of six children, only two of whom survive her. The older of these two is now sixty-two years of age.

PHILADELPHIA.

— For some time a sort of running fight has been kept up between some physicians and some druggists, which, of course, has been fomented by the daily papers. General charges of substitution of cheap and inferior drugs were made by one party, and counter-charges of mistakes and favoritism were returned by the other. Finally the druggists, at a meeting called for the purpose, appointed a committee and demanded the facts, volunteering at the same time to prosecute the offenders in the courts. After some delay several instances were furnished them where druggists had dishonestly substituted other preparations than those called for in prescriptions, to the detriment of patient and the physician, but the matter has been quietly allowed to rest; at all events no prosecutions have been announced. The latest move was one by Dr. Henry Loffmann, who read a paper on The Adulteration and Substitution of Drugs as Elements of Uncertainty in Medical Practice, before the Philadelphia County Medical Society, December 13th.

— The first lecture of Dr. Austin Flint, of New York, before the County Medical Society was so largely attended that it was decided to have the next two lectures in the ample amphitheatre of the Jefferson Medical College Hospital. The second lecture, of December 16th, was, as announced, on Auscultation and the Respiratory Murmur, with its Abnormal Manifestations. The final lecture, on The Râles and Vocal Signs, is set down for January 13, 1883. These lectures will not appear as part of the Proceedings of the Society, and it is understood that Professor Flint reserves the right of publication.

Arrangements are being made to tender a complimentary dinner to Professor Flint by some of the members of the profession of Philadelphia on the night before the last lecture is to be delivered.

— Owing chiefly to the generosity of Mr. Lankman, the President of the Board of Managers of the German Hospital, a new wing is to be added to the building, which will furnish a clinical amphitheatre for lecturing purposes. It is also intended to erect on the capacious grounds attached to the hospital a building to be used as an Old Men's Home.

ST. LOUIS.

— Diphtheria and scarlatina being prevalent in many portions of St. Louis, the Board of Health have adopted the following rules: "Bodies of persons who have died of scarlet fever, small-pox, or diphtheria shall not be allowed to be shipped or taken to other points, and the public is hereby advised to effect a speedy and quiet burial of persons so deceased." The following circular was also approved and issued: "Whereas, scarlet fever and diphtheria prevail to a considerable extent in various sections of the United States, and meteorological and other influences appear to be favorable to the transmission and spread of the diseases specified; we would earnestly recommend that families who have lost a member from the above, or from any other contagious disease, carry out the burial as rapidly as possible, and discountenance visiting the residences and the attendance of friends at the funeral." The circular also requests physicians to look to the disinfecting and fumigating of such places, and to remember the duties required when attending cases of contagious diseases. It also calls attention to the law which makes it a misdemeanor for parents to send children to school after it is known there is a disease of a contagious nature in their family, and for any principal or teacher of a private or public school to allow any such pupil to attend. The circular concluded: "We also recommend that undertakers thoroughly air, cleanse, and disinfect any carriage or conveyance that may have been used to carry the body of any child or person who may have died of scarlet fever, diphtheria, or any other contagious or infectious disease."

—The sanitary condition of all the public schools is now being strictly investigated by the Board, and every precaution taken to prevent the spread of disease.

— The Mayor has filled the vacancy caused by the resignation of Dr. P. V. Schenck as Superintendent of the Female Hospital by the appointment of Dr. George F. Hulbert to the position. Dr. Hulbert is a young man, a graduate of the St. Louis Medical College, and is supported by nearly all the most prominent physicians here. The appointment is generally regarded as a good one, the only objection urged being the youth of the appointee.

Miscellany.

THE CITY WATER. A CORRECTION.

December 23, 1882.

Mr. Editor, — In the report of my remarks at the Suffolk District Medical Society meeting, the following words are found in reference to our city water: "He did not dare to use it in his house for domestic or drinking purposes." This is not strictly true. I do not use it at my table for drinking, and I always strain it for bathing, — and, at times, even with straining, the water is so dirty-looking that I cannot use it.

Yours respectfully,
Henry I. Bowditch.

ACUTE ASCENDING PARALYSIS.

A careful account of what seems to have been a case of this rare disease is given in the *Dublin Journal of Medical Science* for October. It was not confirmed by autopsy, but inasmuch as it is very uncommon to find any structural lesions of the cord or brain in this disease, the lack of post-mortem examination is the less to be regretted, except as eliminating all other disease.

The patient was a clergyman, aged thirty-six, who had been doing the work of two parishes, and was much overworked. He had had typhus fever eleven years before, and had also a slight crepitus at the left apex, which was stationary, and did not impair his usefulness or activity. Having been exposed to smallpox, he was successfully vaccinated February 21st.

The history is described by the attendant, Dr. Alexander Dempsey, as follows: —

His present illness commenced on the 5th of March with a cold in the head and in the chest, — with cough and expectoration. An eruption of herpes appeared at the same time on his mouth and nose. He felt generally out of sorts, but was not so ill as to necessitate his remaining in bed or even in the house. He attended to his clerical duties, though not so much as usual, but this was more because of the unsightly eruption on his face than of his unfitness for the work. His appetite was not affected. On the morning of the 10th of March, while shaving, he remarked a numbness and want of sensation in his fingers. He could not feel the razor in his hand. This numbness was felt in the thumb and the two first fingers of both hands, and extended as high as the wrists. Numbness was also felt along the backs of the thighs and legs, and in the soles of the feet. On Sunday, the 12th of March, with these symptoms unchanged, he officiated twice, and in the evening preached for nearly an hour. He felt very much exhausted after this effort. The next day he was a little better, and, the day being fine, he went out for a long walk. He attributed the numbness in the legs to bad circulation, and he thought a good walk would make him all right. He walked very fast for about four miles, but did not feel his feet touching the road. The sensation was similar to that of walking on deep snow. He was thoroughly exhausted when he came home, but ate a good dinner. Before going to bed he took a large dose of Eno's fruit salt, which acted several times during the night. He rested very badly. — felt hot and uncomfortable, and perspired very freely. However, perspirations had been very profuse for the last two or three nights.

The following day I found him sitting at the window with a newspaper beside him, which he had been trying to read, but the letters after a time became so blurred and indistinct that he was obliged to give it up. This temporary defect of vision was the only one complained of during his entire illness. The conjunctivæ were congested, and the pupils moderately contracted. This condition of the pupils remained throughout. The conjunctivæ, however, in a day or so became normal. His face was deadly pale, and the expression worn and haggard. From the beginning he had neither dizziness, headache, nor pains in the back or legs. Pressure on the spinous processes did not cause pain. His legs and hands were quite cold, though he felt a burning heat in them. His grasp was moderately firm. The patella tendon reflex was present. On getting him to walk I noticed slight unsteadiness in his gait. He lifted his feet well off the floor, but let them down in a tremulous, clumsy way, somewhat like an ataxic patient. He complained of great weakness in his legs and back. Pulse was 74, and temperature 98° F.; tongue was coated with a light yellow fur in the centre, red and moist at the edges and tip. There was no disturbance of the bladder. He passed water freely, which was loaded with lithates, but was free from albumen. Breathing was hurried, and there was dullness and crepitus at the left apex, and moist râles scattered through both lungs. Expectoration was thick, and slightly rusty in color. The heart's sounds were healthy and regular, but the pulsations were forcible and visible over the front of the chest. His mind was perfectly clear. I prescribed bromide and iodide of potassium, a mustard foot bath, a large mustard blister to the back, and rest in bed.

March 15th. Pulse 70, temperature normal. Spent a very restless night. Complains of an intolerable burning heat in the legs and up along the spine. This was the most annoying symptom he had, and it continued during the remainder of his illness. He also complained of burning heat in his mouth, but he had no thirst. The weakness in his legs is increasing. He attempted to get out of bed in the morning, but fell on the floor. He can draw his legs fully and quickly up to him in bed, or move them about, and he can raise his arms up or move them in any direction, but his grasp is much more feeble than it was yesterday. I got him out on the floor. He raised himself off the bed with great difficulty, and when up could not stand without support. His legs were very weak and gave way under him, and this was especially the case when he attempted to turn on the floor. This effort to walk quite exhausted him. Patellar reflex is present, but more feeble. Has some difficulty in swallowing to-day; some tea taken quickly came back through his nose. There is no paralysis of the face, and he protrudes the tongue in a straight line, and there is no difficulty of speech. During the night had a sharp boring pain in the head; it only lasted for a short time, and was the only actual pain which he had anywhere during his entire illness. Sensation was impaired, but not lost. Contact with the skin was delayed in perception, and this was especially the case in the lower parts of the legs. Sensibility was not further disturbed during the disease. The cough was troublesome, owing to the accumulation of phlegm, and there was an evident inability to expectorate it, though it was quite loose. I had the advantage of Dr. Cuming's assistance in the case to-day. The bowels not having acted since, we prescribed a brisk purge, and the bromide was reduced in quantity and the iodide increased, while derivatives were applied along the spine.

March 16th. Pulse 60, temperature normal. Had one hard motion this morning. Has difficulty now in drawing the legs up to him, and there is less power in the arms. Sitting up and turning in bed are becoming impossible without help. No muscular twitchings nor spasmodic manifestations anywhere. The difficulty of swallowing is increasing. Urine passed freely.

March 17th. Pulse 60, temperature 98° F. Inability to expectorate secretion from lungs. Only slightest movements possible in the legs; patellar reflex completely absent. Arms still can be raised, but in a tremulous, zigzag way. No longer able to grasp the hand. Deglutition more difficult and respiration more impaired. Speech thick. Mind clear. In the afternoon could swallow nothing. The bowels had never acted freely, though repeated purgatives had been given. Functions of bladder perfect. No paralysis of facial muscles. Died at 7.30 P. M. on this, the eighth day from the first symptoms of numbness, the fourth after the first motor paralysis, and the thirteenth after catching cold.

In commenting on the case the writer says: The absence of paralysis of the sphincters was one of the strong points which we relied on in distinguishing this disease from acute central myelitis. In the latter disease it is often the first symptom which attracts attention, or if not it generally sets in early in the disease. The functions of the sphincters of the bladder and rectum were perfect until the last; indeed, in the case of the latter, obstinate constipation was one of our greatest difficulties in the treatment, — due, no doubt, to paralysis of the abdominal muscles and the muscular coats of the intestines.

Again, the character of the onset of the attack and the gradual progress of the disease were different from the usual course of acute myelitis. Its inception was marked by none of the severe disturbances of sensation or of motion which generally characterize the beginning of the latter disease. There were neither muscular spasms, contractions, fibrillar twitchings, nor even pains, during the entire course of the illness, and the sensation was only very slightly impaired.

The progress of the disease was also characteristic of acute ascending paralysis, as first described by Landry, and more recently by Westphal. It slowly crept over the body, without fever, delirium, loss of intelligence or memory, or the development of decubitus, and finally attacked the functions of the medulla oblongata, producing paralysis of deglutition, asphyxia, and death.

The condition of the patellar reflex is a point of importance in the present case. There is only one case reported by Westphal in which it was found lacking. In our patient, with the advance of the disease it gradually became extinct, and on the last day of his illness was entirely absent.

In acute myelitis there is early failure of all reflex actions. In the latter disease there is also a rapid development of acute bedsores, — a complication which did not arise in the present case.

From acute myelitis disseminata the distinction is not so easy; however, in it, too, there is generally paralysis of the sphincters and spastic symptoms, but often it is impossible to decide the question positively without the aid of a post-mortem examination.

"MIRRORED WRITING."

We translate from *Le Journal de Médécine et de Chirurgie* a note on this curious phenomenon. This term (*l'écriture en miroir*) designates a peculiar method of writing observed in certain individuals who are aphasic or affected with right-sided hemiplegia. It has been noticed that some patients under those circumstances, when they tried to write with the left hand, instead of writing from left to right, made the lines from right to left, reversing the characters so that their arrangement was that of printing type, and they presented the appearance of ordinary writing when seen in a mirror. Some authors have considered this phenomenon as specially connected with aphasia. Dr. Martial Durand, in an article in *Le Journal de Médécine de Bordeaux*, endeavors, on the contrary, to show that this mode of writing, which is met more particularly in patients with cerebral affections, is nevertheless physiological when a special education does not intervene to modify it. In fact, the majority of children when asked to write with the left hand have this inverted penmanship. In adults differences are observed according to the mental condition of the individual. In persons who are inteligent, or who write a good deal, the inverted penmanship is not found. But in those who have only moderate intelligence and write but seldom, it is found that on using the pen with the left hand sometimes one and sometimes the other of the two methods occur, with this to be noticed, that in the inverted penmanship the letters are better formed than in the natural chirography. Finally, in persons whose intellect is not yet developed, and who are not used to writing, that is to say, in whom the mechanical part of the act, the impression of the formative movements, is more prominent than the visual image, it is the inverted writing which is oftenest seen. In other words, physiologically the left hand has a great tendency to reproduce exactly (symmetrically) the movements of the right, which causes the inversion of the letters, which amounts to saying that the mirrored writing is the normal penmanship of the left hand.

If this is true, it is reasonable to suppose that the races which write *towards* the median line of their body (*écriture centripète*), that is to say, from right to left (as the Hebrews and the Arabs), ought to write with the left hand also centripetally, and with inverted characters. Now this is what is established from the researches of M. Charles Vogt. All the Arabs and Israelites noticed by him who wrote centripetally with the right hand, did write with the left hand frocm left to right and with the letters inverted.

To conclude, it appears from the researches of M. Durand that mirrored writing is not a symptom connected with aphasia. Nevertheless it appears to be produced in some cases where the patient has lost in a certain degree his intelligence. It is, then, a fact interesting to determine, it is true, but by no means pathognomonic of lesions producing aphasia.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 16, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Typhoid Fever.
New York	1,206,590	598	199	16.21	19.38	5.18	2.67	.50
Philadelphia	846,984	370	128	17.01	9.99	13.50	1.08	.81
Brooklyn	566,689	272	101	20.88	23.40	7.29	5.04	1.44
Chicago	503,304	212	100	18.80	11.28	7.52	2.82	3.29
Boston	362,535	186	55	16.11	10.74	12.89	1.07	5.4
St. Louis	350,522	179	78	25.76	20.16	13.44	3.92	1.68
Baltimore	332,190	219	67	36.80	6.44	13.34	1.84	2.30
Cincinnati	255,708	112	41	19.58	19.58	4.45	2.67	8.90
New Orleans	216,140	126	24	29.46	9.36	1.56	1.56	1.56
District of Columbia	177,638	77	31	14.19	15.48	5.16	5.16	—
Pittsburg	156,381	64	23	20.28	10.92	12.24	1.56	10.92
Buffalo	155,137	67	28	29.40	10.29	5.88	16.17	4.41
Milwaukee	115,578	—	—	—	—	—	—	—
Providence	104,857	43	12	39.52	9.30	9.30	2.33	20.92
New Haven	62,882	13	4	—	15.38	—	—	—
Charleston	49,999	27	7	14.81	7.41	3.70	—	3.70
Nashville	43,461	28	9	17.85	17.85	10.71	—	—
Lowell	59,485	26	8	15.38	11.54	7.69	—	3.85
Worcester	58,295	14	8	21.42	14.28	7.14	—	—
Cambridge	52,740	18	7	44.44	—	44.44	—	—
Fall River	49,006	15	8	20.00	6.66	13.33	—	—
Lawrence	39,178	13	2	23.07	7.69	15.48	—	7.69
Lynn	38,284	8	3	25.00	25.00	—	—	—
Springfield	33,340	10	2	30.00	—	20.00	—	—
Salem	27,598	7	2	14.28	—	14.28	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	5	2	40.00	20.00	20.00	—	—
Holyoke	21,851	15	10	13.33	6.66	6.66	—	6.66
Chelsea	21,785	11	1	18.18	—	18.18	—	—
Taunton	21,213	8	1	25.00	—	12.50	—	—
Gloucester	19,329	6	4	—	16.66	—	—	—
Haverhill	18,475	5	1	20.00	—	20.00	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	8	1	12.50	25.00	12.50	—	—
Newburyport	13,537	5	1	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	5	2	20.00	—	20.00	—	—
Twenty Massachusetts towns	-	56	11	19.64	7.14	12.50	1.79	3.57

Deaths reported 2828 (no report from Milwaukee): under five years of age 983: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 597, lung diseases 405, consumption 399, diphtheria and croup 261, scarlet fever 74, small-pox 64, typhoid fever 63, diarrhœal diseases 54, malarial fevers 29, whooping-cough 14, measles 12, cerebro-spinal meningitis nine, erysipelas eight, puerperal fever seven. From *small-pox*, Baltimore 41, New Orleans nine, Philadelphia and Chicago five each, Pittsburg and Nashville two each. From *diarrhœal diseases*, New York 18, New Orleans 10, Brooklyn five, St. Louis four, Pittsburg three, Boston, Buffalo, and Lynn two each, Chicago, District of Columbia, Charleston, Lowell, Worcester, Fall River, Taunton, and Brooklyn one each. From *malarial fevers*, New York 11, New Orleans six, Brooklyn five, St. Louis three, Chicago, Baltimore, District of Columbia, and Charleston one each. From *whooping-cough*, New York and Cincinnati three each, Brooklyn and St. Louis two each, New Orleans, Pittsburg, Providence, and Fall River one each. From *measles*, New York eight, Providence two, Philadelphia and District of Columbia one each. From *cerebro-spinal meningitis*, New York three, St. Louis two, Buffalo, Worcester, Somerville, and Holyoke one each. From *erysipelas*, New York four, Chicago, Boston, Cincinnati, and Buffalo one each. From *puerperal fever*, Chicago three, Brooklyn, St. Louis, Pittsburg, and Buffalo one each.

Twenty-one cases of small-pox were reported in New Orleans, Cincinnati six, Brooklyn two, Pittsburg one; diphtheria 44, scarlet fever 22, and typhoid fever seven, in Boston.

In 36 cities and towns of Massachusetts, with a population of 996,037 (population of the State 1,783,086), the total death-rate for the week was 20.78 against 20.63 and 20.31, for the previous two weeks.

For the week ending November 25th, in 171 German cities and towns, with an estimated population of 8,516,821, the death-rate was 23.4. Deaths reported 3830: under five years of age 1755, consumption 510, lung diseases 390, diphtheria and croup 230, diarrhœal diseases 135, scarlet fever 121, measles and rötheln 67, typhoid fever 57, whooping-cough 54, puerperal fever 20, typhus fever (Braunschweig one) one. The death-rates ranged from 12.3 in Leipzig to 33.5 in Frankfort a. O.; Königsberg 30.1; Breslau 30.8; Munich 28; Dresden 23.3; Berlin 23.1; Hamburg 23.6; Cologne 22.3; Frankfort a. M. 13.4; Strasburg 14.6.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending December 2d, the death-rate was 22.3. Deaths reported 3615: acute diseases of the respiratory organs (London) 424, measles 115, scarlet fever 111, fever 85, whooping-cough 49, diarrhœa 35, diphtheria 22, small-pox (London 10, Newcastle four, Nottingham one) 15. The death-rates ranged from 14.7 in Bolton to 28.6 in Newcastle-on-Tyne; Birkenhead 18.1; Brighton 19; Birmingham 20.9; Sheffield 22.3 Leeds 24.3; Sunderland 25.9; Manchester 26.1; Liverpool 28.1. In Edinburgh 20.7; Glasgow 27.8; Dublin 25.6.

For the week ending December 2d, in the Swiss towns, population 494,390, there were 38 deaths from acute diseases of the respiratory organs, consumption 28, diphtheria and croup 14, typhoid fever 12, diarrhœal diseases nine, scarlet fever one, puerperal fever one. The death-rates were, at Geneva 10.3 Zurich 22.3; Basle 20.4; Berne 25.3.

The meteorological record for the week ending December 16th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
December, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 10	29.976	28	34	22	88	88	83	86	SE	W	NW	5	4	5	S	T	R	—	—
Mon., 11	29.797	28	34	27	94	100	88	94	N	NW	W	12	11	12	S	T	F	—	—
Tues., 12	30.284	25	30	20	73	74	73	73	W	W	NW	13	7	3	C	F	C	—	—
Wed., 13	29.874	32	45	19	88	94	89	90	NW	SE	W	1	21	14	G	S	C	—	—
Thurs., 14	29.586	33	40	29	68	62	60	63	W	W	SW	16	18	12	C	C	F	—	—
Fri., 15	29 669	25	33	17	77	64	70	70	W	W	W	12	20	14	C	C	C	—	—
Sat., 16	29.651	21	30	12	70	56	70	65	W	W	W	10	11	7	C	C	O	—	—
Means, the week.	29.834	27						71										26.00	1.08

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY. DR. GEORGE OSBORNE, OF PEABODY.

DR. GEORGE OSBORNE, who died September 21st, was one of Peabody's most honored citizens. He was born December 23, 1798, entered Harvard University in 1814, had there as chum Dr. George Choate, of Salem, and graduated in the class of 1818.

Since both his father and grandfather were sea-captains, it was natural that after graduation he should accept the position of supercargo, in which capacity he made two voyages to Sumatra and one to European ports. In 1826 he commenced the study of medicine with Dr. William G. Walker, of Charlestown. Afterwards attended lectures under Dr. Valentine Mott and others in New York, and received his degree in 1829. He married Miss Sarah Whittredge, of Salem, and in January, 1830, commenced practice in South Danvers, now Peabody, where he continued to be a highly valued practitioner until severe facial neuralgia compelled his retirement from professional duties in 1872. He was a man of very methodical habits, and kept such careful records of his medical cases and business affairs that they have much value as helps to local history. His medical and surgical skill was so extensively recognized that he had a regular and considerable practice in Salem as well as in Danvers. He was a member of the East India Marine Society of Salem, President of the Warren Five Cents Savings Bank, and Treasurer of the Peabody Institute Fund. He filled an unexpired term in the Massachusetts State Senate, was at one time Democratic candidate for Congress, and "filled other offices of trust and responsibility."

He leaves a widow and a son and daughter. Dr. George S. Osborne, of Peabody, the last Anniversary Chairman of the Massachusetts Medical Society, is his son, and has honorably held for many years the place vacated by his father. A. H. J.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 15, 1882, TO DECEMBER 22, 1882.

ALDEN, CHARLES H., major and surgeon. Now in St. Paul, Minn., to proceed to Fort Yates, D. T., and report to the commanding officer of that post for duty. Paragraph 3, S. O. 212, Department of Dakota, December 14, 1882.

BANISTER, J. M., assistant surgeon. To proceed to Camp on White River, Colorado, and report to the commanding officer. Paragraph 7, S. O. 250, Department of Missouri, December 11, 1882.

BROWN, JUSTUS M., major, surgeon. Granted leave of absence for fifteen days. S. O. 119, Department of the South, December 11, 1882.

HALL, W. R., assistant surgeon. Granted leave of absence for one month. Paragraph 8, S. O. 250, Department of the Missouri, December 11, 1882.

PORTER, J. Y., captain and assistant surgeon. To proceed to St. Francis Barracks, St. Augustine, Fla., and to report to the commanding officer of that post for temporary duty. Paragraph 2, S. O. 119, Department of the South, December 11, 1882.

WYETH, M. C., first lieutenant and assistant surgeon. Granted one month's leave of absence. Paragraph 4, S. O. 206, Department of Dakota, December 8, 1882.

SUFFOLK DISTRICT MEDICAL SOCIETY. — There will be a general meeting of the Society on Saturday, December 30th, at 19 Boylston Place, at 7.45 P. M. The following papers will be presented: Histology of the Uterine Myxoma, illustrated by Microscopic Preparations, Dr. H. O. Marcy. A Household Epidemic from Defective Drainage, Dr. H. W. Broughton. Two Cases of Tetanus, with Recovery, Dr. E. Chenery. Supper at nine o'clock. H. C. HAVEN, *Secretary.*

SUFFOLK DISTRICT MEDICAL SOCIETY. — *The Surgical Section* will meet on Wednesday, January 3d, at 19 Boylston Place, at 7.45 P. M. Dr. H. P. Bowditch will show Bell's Induction Balance and Electric Probe for Bullets. Dr. J. Collins Warren will report Two Cases of Colotomy. Dr. John Homans will open the discussion. Dr. A. T. Cabot will report a Case of Nephrotomy for Hydronephrosis.

H. C. HAVEN, *Secretary.*

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at the Medical Library, No. 19 Boylston Place, on Monday, January 1, 1883, at eight o'clock P. M. Reader, Dr. C. Ellery Stedman. Subject, A Case of Multiple Strictures of the Small and the Large Intestine following Enteritis. Dr. W. A. Dunn will report Four Cases of Emphysema occurring during Labor. C. M. JONES, *Secretary.*

928